DUPLICATE SAMPLE ANALYSIS:

Comments:

For this SDG collocated samples are not identified.

ICP SERIAL DILUTION ANALYSIS:

Comments:

For this SDG the laboratory included Batch QC serial dilution results. No action is taken since the Batch QC sample may not represent the matrix under study.

OVERALL ASSESSMENT:

All QC results reviewed were within specification and no actions or qualifiers were necessary.

TABLE A-2.

TECHNICAL REVIEW ACTION SUMMARY SDG 10305724

Arsenic
Cadmium
Potassium
Selenium
Phosphorus
If the field is left blank no actions or qualifications were necessary.

SDG 10305759

ELEMENTAL PARAMETERS

SDG 10305759

ELEMENTAL PARAMETERS

The data evaluation was based on USEPA SW-846 Method 6010B for cadmium, potassium, and phosphorus and 6020 for arsenic and selenium (Methods) and included the following parameters:

- calibration
- blanks
- ICP interference check sample
 - matrix spike analysis
 - duplicate sample analysis
- laboratory control sample analysis
 - ICP serial dilution analysis
- ICPMS internal standard analysis
 - detection limits
 - overall assessment

Table A-3 summarizes the technical review actions that are detailed below.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

^{*} All criteria were met for this parameter.

CALIBRATION:

Low-level calibration verifications (CRI) providing recoveries not within 90-110% are tabulated below:

CRI DATE/TIME	ELEMENT	RECOVERY (%)
5-21/02:27	cadmium	60.0

Associated samples requiring actions:

CRI ID.	ELEMENT	ASSOCIATED SAMPLES	
5-21/02:27	cadmium	ALL SAMPLES	

Action:

• For recoveries below the lower limit results <2PQL are flagged as estimated with the potential for low bias (J-).

Comment:

Only calibrations bracketing samples associated with this SDG are evaluated.

BLANKS:

Blanks providing positive results and their associated 5X action levels (AL) are tabulated below:

BLANK ID. CCB 5-21/04:32	ELEMENT potassium	CONC. (mg/L) 0.126	AL (mg/L) 0.630
CCB 5-21/05:31	potassium	0.354	1.77
505701	arsenic	0.00029	0.0015

Associated samples with positive results reported below the action level: NONE

Comments:

Only calibration blanks bracketing the samples associated with the SDG were evaluated.

MATRIX SPIKE ANALYSIS:

Comments:

For sample 505157 the native level of potassium exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS:

Comments:

For this SDG sample 505601 is collocated with sample 505156. For this collocated sample pair all precision limits specified in the QAPP were met.

DETECTION LIMITS:

For this SDG, the laboratory was required to report results positive to their method detection limit (MDL). The MDL (described in 40CFR Part 136, Appendix B and incorporated by reference in SW-846), provides an error band, by definition, of \pm 100 percent. The Estimated Quantitation Limit (EQL), is established at 5-10X the MDL in SW-846.

Action:

Positive results reported between the MDL and PQL are flagged as estimated (J).

Comments:

The data user is cautioned that these results may not be analytically reproducible or statistically valid.

OVERALL ASSESSMENT:

Results reported <2 PQL for cadmium in all samples are flagged as estimated with the potential for low bias (J-) due to non-compliant CRI recovery.

Positive results reported between the MDL and PQL are flagged as estimated (J) due to uncertainty at the low level.

All additional QC results reviewed were within specification and no further actions or qualifiers were necessary.

TABLE A-3.

TECHNICAL REVIEW ACTION SUMMARY SDG 10305759

Arsenic J1

Cadmium J-1

Potassium

Selenium J1

If the field is left blank no actions or qualifications were necessary.

J1 - Result is flagged as estimated (J) due to uncertainty at the low levels.

J-1 - Result reported <2PQL is flagged as estimated with the potential for

low bias (J-) due to non-compliant CRI recovery.

SDG 10312267

ELEMENTAL PARAMETERS

The data evaluation was based on USEPA SW-846 Method 6010B for cadmium, potassium, and phosphorus and 6020 for arsenic and selenium (Methods) and included the following parameters:

- calibration
- blanks
- * ICP interference check sample
 - matrix spike analysis
 - duplicate sample analysis
- laboratory control sample analysis
 - ICP serial dilution analysis
- ICPMS internal standard analysis
- * detection limits
 - overall assessment

Table A-4 summarizes the technical review actions that are detailed below.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

^{*} All criteria were met for this parameter.

CALIBRATION:

Low-level calibration verifications (CRI) providing recoveries not within 90-110% are tabulated below:

CRI DATE/TIME	ELEMENT	RECOVERY (%)

6-30/15:37 cadmium 89.3

potassium 87.2

Associated samples requiring actions:

CRI ID.	ELEMENT	ASSOCIATED SAMPLES

6-30/15:37 cadmium ALL SAMPLES

potassium 505704

Action:

 For recoveries below the lower limit results <2PQL are flagged as estimated with the potential for low bias (J-).

Comment:

Only calibrations bracketing samples associated with this SDG are evaluated.

BLANKS:

Comments:

Only calibration blanks bracketing the samples associated with the SDG were evaluated.

MATRIX SPIKE ANALYSIS:

Comments:

For sample 505108 the native level of potassium exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS:

Comments:

For this SDG sample 505604 is collocated with sample 505121. For this collocated sample pair all precision limits specified in the QAPP were met.

OVERALL ASSESSMENT:

Results reported <2 PQL for cadmium in all samples and potassium in sample 505704 are flagged as estimated with the potential for low bias (J-) due to non-compliant CRI recovery.

All additional QC results reviewed were within specification and no further actions or qualifiers were necessary.

TABLE A-4.

TECHNICAL REVIEW ACTION SUMMARY SDG 10312267

Arsenic

Cadmium J-1

Potassium J-1

Selenium

If the field is left blank no actions or qualifications were necessary.

J-1 - Result reported <2PQL is flagged as estimated with the potential for low bias (J-) due to non-compliant CRI recovery.

SDG 10305190

WET CHEMISTRIES

SDG 10305190

WET CHEMISTRIES

The data evaluation was based on the procedures set forth in the Methods and included the following parameters:

- + holding times
- calibration
 - blanks
 - matrix spike sample analysis
- standard reference material analysis
 - duplicate sample analysis
 - detection limits
 - overall assessment

* All criteria were met for this parameter.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

A glossary of data qualifier definitions is presented in Appendix B.

BLANKS:

Blanks reported with positive values and their associated 5X action levels are tabulated below:

BLANK ID.	<u>PARAMETER</u>	CONC. (mg/L)	ACTION LEVEL
MB 1960611	fluoride (ISE)	0.13	0.65
505700	ammonia-N	0.021	0.11
	o-phosphate-P	0.0025	0.013

Associated samples with values reported positive but below the action level:

BLANK ID.	<u>PARAMETER</u>	ASSOCIA	TED SAMPLES
MB 1960611	fluoride (ISE)	505178	505600
		505131	
505700	ammonia-N	505128	505127
		505131	

Action:

 Associated positive sample results are flagged as not-detected at the reported value (U).

Comments:

The data user is cautioned that for the field blanks the actions may not apply directly to the indicated samples (e.g. the contamination is in the blank water per-se).

MATRIX SPIKE SAMPLE ANALYSIS:

Samples providing matrix spike (MS)/MS duplicate (MSD) recoveries or precision not within the laboratory default limits when the native level is reported at less than four times the spiking level are tabulated below:

SAMPLE ID.	<u>ANALYTE</u>	MS/MSD RECOVERY (%)
505114	chloride	85/85
	fluoride (IC)	214/213*

Action:

• For both MS and MSD recoveries below the lower limit sample results reported for the analyte are flagged as estimated with the potential for low bias (J-).

Comments:

* - Likely a spiking error. On the basis of professional judgment no action is applied.

The above action is applied to <u>all</u> environmental samples associated with the SDG.

For sample 505172 the native level of sulfate exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS

- Samples 505178, 505600, 505131, and 505114 were analyzed for fluoride by IC
 and ISE Methods and the results for samples 505178 and 505114 were within the
 precision limits expected for laboratory replicates. For samples 505131 and
 505114 the IC result was larger. For these samples only the results from the ISE
 Method should be used.
- 2. Field Duplicates.

Comments:

For this SDG sample 505600 is collocated with sample 505178. For this collocated sample pair all precision limits specified in the QAPP were met.

DETECTION LIMITS:

Action:

Positive values reported between the MDL and PQL are flagged as estimated (J).

Comments:

Any values below the PQL contain inherently increasing error bands as the numbers become smaller. It is essential that the data user considers these statistical impacts on data quality at the low levels.

OVERALL ASSESSMENT:

The Method blank was reported with fluoride (ISE) at a concentration that generated an action level resulting in the flagging of the positive results reported in samples 505178, 505600, and 505131 as not-detected at the reported value (U).

The field blank was reported with ammonia-N present at a concentration that generated an action level resulting in the flagging of the positive results reported for samples 505128, 505127, and 505131 as not-detected at the reported value (U).

Sample 505114 provided MS/MSD recoveries of chloride below the laboratory default limits. Results reported for this parameter in all environmental samples associated with the SDG are flagged as estimated with the potential for low bias (J-).

Samples 505131 and 505114 were analyzed for fluoride by both IC and ISE Methods. Only the results from the ISE Method should be used since the IC result was significantly larger.

Any values reported positive between the MDL and PQL are flagged as estimated (J) due to uncertainty at the low levels.

All additional QC criteria evaluated were within specification and no further actions or
flagging were required or deemed necessary.

SDG 10305724

WET CHEMISTRIES

SDG 10305724

WET CHEMISTRIES

The data evaluation was based on the procedures set forth in the Methods and included the following parameters:

- + holding times
- calibration
 - blanks
 - matrix spike sample analysis
- * standard reference material analysis
 - duplicate sample analysis
- detection limits
 - overall assessment

* All criteria were met for this parameter.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

A glossary of data qualifier definitions is presented in Appendix B.

MATRIX SPIKE SAMPLE ANALYSIS:

Comments:

For this SDG the laboratory included Batch QC matrix spike results. No action is taken since the Batch QC sample may not represent the matrix under study.

DUPLICATE SAMPLE ANALYSIS:

For this SDG collocated samples are not identified.

OVERALL ASSESSMENT:

All additional QC criteria evaluated were within specification and no further actions or flagging were required or deemed necessary.

SDG 10305759

WET CHEMISTRIES

SDG 10305759

WET CHEMISTRIES

The data evaluation was based on the procedures set forth in the Methods and included the following parameters:

- holding times
- calibration
 - blanks
 - matrix spike sample analysis
- standard reference material analysis
 - duplicate sample analysis
 - detection limits
 - overall assessment
- * All criteria were met for this parameter.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

A glossary of data qualifier definitions is presented in Appendix B.

HOLDING TIMES:

The following samples were analyzed outside the indicated method-specified holding time from sample collection to analysis:

SAMPLE ID.	<u>PARAMETER</u>	HOLDING TIME (DAYS)
ALL SAMPLES	nitrate-N	5-6
	o-phosphate-P	5-6

Action:

None, see comments.

Comments:

No action is taken since a FMC keeping quality study indicated that these parameters are stable beyond the above-indicated holding times.

BLANKS:

Blanks reported with positive values and their associated 5X action levels are tabulated below:

BLANK ID.	PARAMETER	CONC. (mg/L)	ACTION LEVEL
MB 1968130	fluoride (ISE)	0.14	0.70
505701	o-phosphate-P	0.017	0.085

Associated samples with values reported positive but below the action level:

BLANK ID.	PARAMETER	ASSOCIATED SAMPLES			
MB 1968130	fluoride (ISE)	505115	505155		
		505156	505157		
		505601			
505701	o-phosphate-P	505183	505158		

Action:

 Associated positive sample results are flagged as not-detected at the reported value (U).

Comments:

The data user is cautioned that for the field blanks the actions may not apply directly to the indicated samples (e.g. the contamination is in the blank water per-se).

MATRIX SPIKE SAMPLE ANALYSIS:

Samples providing matrix spike (MS)/MS duplicate (MSD) recoveries or precision not within the laboratory default limits when the native level is reported at less than four times the spiking level are tabulated below:

SAMPLE ID.	ANALYTE	MS/MSD RECOVERY (%)		
505157	fluoride (IC)	0/0*		
	nitrate-N	/88		
	ammonia-N	113/117		

Action:

 For both MS and MSD recoveries above the upper limit positive sample results reported for the analyte are flagged as estimated with the potential for high bias (J+).

Comments:

* - Likely due to the substantial interference (vide infra). On the basis of professional judgment no action is applied.

The above action is applied to <u>all</u> environmental samples associated with the SDG.

DUPLICATE SAMPLE ANALYSIS

 Samples 505115, 505123, 505155, 505156, 505157, and 505601 were analyzed for fluoride by IC and ISE Methods and the results for samples 505123 and 505155 were within the precision limits expected for laboratory replicates. For samples 505115, 505156, 505157, and 505601 the IC result was larger. For these samples only the results from the ISE Method should be used.

Field Duplicates.

Comments:

For this SDG sample 505601 is collocated with sample 505156. For this collocated sample pair all precision limits specified in the QAPP were met.

DETECTION LIMITS:

For this SDG, the laboratory was required to report results to their method detection limit (MDL). The MDL (described in 40CFR Part 136, Appendix B and incorporated by reference in SW-846), provides an error band, by definition, of \pm 100 percent. The Estimated Quantitation Limit (EQL) is established at 5-10X the MDL in SW-846.

Action:

Positive values reported between the MDL and PQL are flagged as estimated (J).

Comments:

Any values below the PQL contain inherently increasing error bands as the numbers become smaller. It is essential that the data user considers these statistical impacts on data quality at the low levels.

OVERALL ASSESSMENT:

The Method blank was reported with fluoride (ISE) at a concentration that generated an action level resulting in the flagging of the positive results reported in samples 505115, 505155, 505156, 505157, and 505601 as not-detected at the reported value (U).

The field blank was reported with o-phosphate-P present at a concentration that generated an action level resulting in the flagging of the positive results reported for samples 505183 and 505158 as not-detected at the reported value (U).

Sample 505157 provided MS/MSD recoveries of ammonia-N above the laboratory default limit. Results reported positive for this parameter in all environmental samples associated with the SDG are flagged as estimated with the potential for high bias (J+).

Samples 505115, 505156, 505157, and 505601 were analyzed for fluoride by both IC and ISE Methods. Only the results from the ISE Method should be used since the IC result was significantly larger.

Any values reported positive between the MDL and PQL are flagged as estimated (J) due to uncertainty at the low levels.

All additional QC criteria evaluated were within specification and no further actions or flagging were required or deemed necessary.

SDG 10312267

WET CHEMISTRIES

The data evaluation was based on the procedures set forth in the Methods and included the following parameters:

- + holding times
- * calibration
 - blanks
 - matrix spike sample analysis
- * standard reference material analysis
 - duplicate sample analysis
 - detection limits
 - overall assessment

* All criteria were met for this parameter.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

A glossary of data qualifier definitions is presented in Appendix B.

BLANKS:

Blanks reported with positive values and their associated 5X action levels are tabulated below:

BLANK ID. PARAMETER CONC. (mg/L) ACTION LEVEL

505704 fluoride 0.0070 0.035

Associated samples with values reported positive but below the action level: NONE

MATRIX SPIKE SAMPLE ANALYSIS:

Comments:

For chloride, nitrate-N, and sulfate the native level exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS

Field Duplicates:

For this SDG sample 505604 is collocated with sample 505121. For this collocated sample pair all precision limits specified in the QAPP were met.

DETECTION LIMITS:

For this SDG, the laboratory was required to report results to their method detection limit (MDL). The MDL (described in 40CFR Part 136, Appendix B and incorporated by reference in SW-846), provides an error band, by definition, of \pm 100 percent. The Estimated Quantitation Limit (EQL) is established at 5-10X the MDL in SW-846.

Action:

Positive values reported between the MDL and PQL are flagged as estimated (J).

Comments:

Any values below the PQL contain inherently increasing error bands as the numbers become smaller. It is essential that the data user considers these statistical impacts on data quality at the low levels.

OVERALL ASSESSMENT:

Any values reported positive between the MDL and PQL are flagged as estimated (J) due to uncertainty at the low levels.

All additional QC criteria evaluated were within specification and no further actions or flagging were required or deemed necessary.

APPENDIX B

DEFINITION OF DATA QUALIFIERS

GLOSSARY OF DATA QUALIFIERS

- The associated value is an estimated quantity.
- R The data are unusable.
- U The parameter is not detected at the reported value.
- B The value is above the MDL or IDL but below the RL, or CRDL

APPENDIX C

GLOSSARY OF ACRONYMS

GLOSSARY OF ACRONYMS

SDG - Sample Delivery Group

USEPA - Unites States Environmental Protection Agency

DQO - Data Quality Objectives

QAPjP - Quality Assurance Project Plan

RPD - Relative Percent Difference

CRDL - Contract Required Detection Limit

RL - Reporting Limit

IDL - Instrument Detection Limit

MDL - Method Detection Limit

CLP - Contract Laboratory Program

ICP - Ion Coupled Plasma

MS - Matrix Spike

MSD - Matrix Spike Duplicate

DATA PACKAGE REPORT
SAMPLE DELIVERY GROUP
RCRA SDG
10305190



ANALYTICAL RESULTS

Project:

FMC RCRA

Pace Project No.: 10305190

Lab ID:	10305190020	Collected: 05/06/15 13:30		Received: 05/07/15 10:15		Matrix: Water		
Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:53	7440-43-9	
26.6	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:53	7440-09-7	
Analytical Method: EPA 6020 Preparation Method: EPA 3020								
0.12	mg/L	0.00050	0.00011	1	05/13/15 21:04	05/19/15 11:23	7440-38-2	
0.0022	mg/L	0.00050	0.00020	1	05/13/15 21:04	05/19/15 11:23	7782-49-2	
Analytical	Method: SM 45	500F/C						
1.0	mg/L	1.0	0.051	1		05/09/15 11:42	16984-48-8	
Analytical	Method: EPA 3	0.00						
132	mg/L Tr	6.0	3.0	5		05/08/15 00:46	16887-00-6	M1
_1:5		0.050	0.0036	1		05/07/15 17:12	16984-48-8	M1
ND	mg/L	0.10	0.050	1		05/07/15 17:12	14797-55-8	
99.5	mg/L	6.0	3.0	5		05/08/15 00:46	14808-79-8	
Analytical Method: EPA 350.1								
1.9	mg/L	0.040	0.020	1		05/19/15 12:50	7664-41-7	
Analytical	Method: SM 45	500-P E						
1.5	mg/L	0.10	0.035	20		05/07/15 15:06		
	Results Analytical ND 26.6 Analytical 0.12 0.0022 Analytical 1.0 Analytical 132 1:5 ND 99.5 Analytical 1.9 Analytical	Results Units Analytical Method: EPA 6 ND mg/L 26.6 mg/L Analytical Method: EPA 6 0.12 mg/L 0.0022 mg/L Analytical Method: SM 45 1.0 mg/L Analytical Method: EPA 3 132 mg/L Analytical Method: EPA 3 132 mg/L Analytical Method: EPA 3 1.9 mg/L Analytical Method: SM 45 1.9 mg/L Analytical Method: SM 45	Results	Results Units PQL MDL Analytical Method: EPA 6010 Preparation Method: PA 6010 Preparation Method: EPA 6020 Preparation Method: EPA 6020 Preparation Method: EPA 6020 Preparation Method: Method: EPA 6020 Preparation Method: Method: SM 4500F/C 0.00050 0.00011 0.00011 0.00020 0.00020 Analytical Method: SM 4500F/C 1.0 mg/L 1.0 0.051 0.051 0.051 0.0036 0.00	Results Units PQL MDL DF Analytical Method: EPA 6010 Preparation Method: EPA ND mg/L 0.0030 0.00065 1 26.6 mg/L 2.5 0.13 1 2.5 0.13 1 2.5 0.13 1 Analytical Method: EPA 6020 Preparation Method: EPA 0.12 mg/L 0.00050 0.00011 1 0.0022 mg/L 0.00050 0.00020 1 2.00050 0.00020 1 2.00050 0.00020 1 Analytical Method: SM 4500F/C 1.0 mg/L 1.0 0.051 1 3.0 5 1 Analytical Method: EPA 300.0 4.5 mg/L 0.050 0.0036 1 3.0 5 1 ND mg/L 0.10 0.050 1 99.5 mg/L 6.0 3.0 5 3.0 5 5 Analytical Method: EPA 350.1 4.9 mg/L 0.040 0.020 1 Analytical Method: SM 4500-P E	Results Units PQL MDL DF Prepared Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 26.6 mg/L 2.5 0.13 1 05/12/15 08:48 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.12 mg/L 0.00050 0.00011 1 05/13/15 21:04 0.0022 mg/L 0.00050 0.00020 1 05/13/15 21:04 Analytical Method: SM 4500F/C 1.0 mg/L 1.0 0.051 1 Analytical Method: EPA 300.0 132 mg/L 6.0 3.0 5 1.5 mg/L 0.050 0.0036 1 ND mg/L 0.10 0.050 1 99.5 mg/L 6.0 3.0 5 Analytical Method: EPA 350.1 1.9 mg/L 0.040 0.020 1 Analytical Method: SM 4500-P E	Results Units PQL MDL DF Prepared Analyzed Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 05/12/15 18:53 26.6 mg/L 2.5 0.13 1 05/12/15 08:48 05/12/15 18:53 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.012 mg/L 0.00050 0.00011 1 05/13/15 21:04 05/19/15 11:23 0.0022 mg/L 0.00050 0.00020 1 05/13/15 21:04 05/19/15 11:23 Analytical Method: SM 4500F/C 1.0 mg/L 1.0 0.051 1 05/09/15 11:42 Analytical Method: EPA 300.0 1 05/09/15 10:46 05/07/15 17:12 05/07/15 17:12 0.0000 1 05/07/15 17:12 05/07/15 17:12 0.0000 1 05/07/15 17:12 0.0000 0.0000 1 05/07/15 17:12 0.0000 0.0000 1 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000<	Results Units PQL MDL DF Prepared Analyzed CAS No. Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 05/12/15 18:53 7440-43-9 26.6 mg/L 2.5 0.13 1 05/12/15 08:48 05/12/15 18:53 7440-09-7 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.0011 1 05/13/15 21:04 05/19/15 11:23 7440-09-7 Analytical Method: SM 4500F/C 0.00050 0.00020 1 05/13/15 21:04 05/19/15 11:23 7782-49-2 Analytical Method: EPA 300.0 1 0.5/09/15 11:42 16984-48-8 Analytical Method: EPA 300.0 5 05/08/15 00:46 16887-00-6 -1:5 mg/L 0.050 0.0036 1 05/07/15 17:12 14797-55-8 99.5 mg/L 0.10 0.050 1 05/07/15 17:12 14797-55-8 99.5 mg/L 0.040 0.020 1 05/19/15 12:50



Project:

FMC RCRA

Pace Project No.:

Date: 05/20/2015 03:30 PM

10305190

Sample: 505124	Lab ID:	10305190018	Collecte	d: 05/06/15	09:50	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	0.00066	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:43	7440-43-9	
Potassium	12.5	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:43	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EP/	3020			
Arsenic	0.012	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:56	7440-38-2	
Selenium	0.0047	+ mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:56	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	174	mg/L J	6.0	3.0	5		05/08/15 01:34	16887-00-6	
Fluoride	0.78	mg/L	0.050	0.0036	1		05/07/15 18:13	** TOP TOWNEY TO	
Nitrate as N	3.1	mg/L	0.10	0.050	1		05/07/15 18:13	14797-55-8	
Sulfate	89.9	mg/L	1.2	0.60	1		05/07/15 18:13	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:48	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-PE						
Orthophosphate as P	0.088	mg/L	0.0050	0.0017	1		05/07/15 14:58		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505126

1 ab ID: 103051

Collected: 0

05/06/15 09:05

Received: 05/07/15 10:15

15 Matrix: Water

Sample: 505126	Lab ID:	10305190017	Collecte	d: 05/06/18	09:05	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EP	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:38	7440-43-9	
Potassium	9.3	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:38	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.0077	mg/L	0.0010	0.00023	2	05/13/15 21:04	05/19/15 10:51	7440-38-2	
Selenium	0.0024	mg/L	0.0010	0.00040	2	05/13/15 21:04	05/19/15 10:51	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	300.0						
Chloride	95.3	mg/L J-	1.2	0.60	1		05/07/15 17:57	16887-00-6	
Fluoride	0.94	mg/L	0.050	0.0036	1		05/07/15 17:57	16984-48-8	
Nitrate as N	2.2	mg/L	0.10	0.050	1		05/07/15 17:57	14797-55-8	
Sulfate	86.5	mg/L	1.2	0.60	1		05/07/15 17:57	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:47	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	0.067	mg/L	0.0050	0.0017	1		05/07/15 14:57		



Project:

FMC RCRA

Pace Project No.:

Date: 05/20/2015 03:30 PM

10305190

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Sa	mp	le:	50	51	27

Lab ID: 10305190016

Collected: 05/06/15 08:30 Received: 05/07/15 10:15 Matrix Water

Sample: 505127	Lab ID: 1	10305190016	Collecte	a: 05/06/1	08:30	Received: 05/	07/15 10:15 Ma	atrix: VVater	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA 6	010 Prepa	ration Meth	od: EP/	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:24	7440-43-9	
Potassium	14.1	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:24	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA 6	020 Prepa	ration Meth	od: EP/	A 3020			
Arsenic	0.0077	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:47	7440-38-2	
Selenium	0.0069	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:47	7782-49-2	
300.0 IC Anions	Analytical N	/lethod: EPA	300.0						
Chloride	298	mg/L I	6.0	3.0	5		05/08/15 00:28	16887-00-6	
Fluoride	0.56	mg/L	0.050	0.0036	1		05/07/15 16:57	16984-48-8	
Nitrate as N	5.6	mg/L	0.10	0.050	1		05/07/15 16:57	14797-55-8	
Sulfate	194	mg/L	6.0	3.0	5		05/08/15 00:28	14808-79-8	
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	0.051 U	mg/L	0.040	0.020	1		05/19/15 12:47	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 4	500-P E						
Orthophosphate as P	0.080	mg/L	0.0050	0.0017	1		05/07/15 14:56		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505128

Date: 05/20/2015 03:30 PM

Lab ID: 10305190015 Collected: 05/06/15 07:55 Received: 05/07/15 10:15 Matrix: Water

Lab ID.	10303130013	Collecte	d. 05/06/13	07.55	Received: US/	07/15 TU. 15 IVI	amx, vvater	
Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical I	Method: EPA 6	010 Prepa	ration Meth	od: EP	A 3010			
ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:17	7440-43-9	
16.7	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:17	7440-09-7	
Analytical I	Method: EPA 6	020 Prepa	ration Meth	od: EP	A 3020			
0.019	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:42	7440-38-2	
0.0051	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:42	7782-49-2	
Analytical I	Method: EPA 3	300.0						
281	mg/L J-	6.0	3.0	5		05/08/15 00:10	16887-00-6	
0.45	mg/L	0.050	0.0036	1		05/07/15 16:42	16984-48-8	
6.9	mg/L	0.10	0.050	1		05/07/15 16:42	14797-55-8	
120	mg/L	6.0	3.0	5		05/08/15 00:10	14808-79-8	
Analytical I	Method: EPA 3	350.1						
0.026Ú L	mg/L	0.040	0.020	1		05/19/15 12:45	7664-41-7	
Analytical I	Method: SM 4	500-P E						
0.16	mg/L	0.0050	0.0017	1		05/07/15 14:55		
	Analytical ND 16.7 Analytical 0.019 0.0051 Analytical 281 0.45 6.9 120 Analytical 0.0260	Analytical Method: EPA 6 ND mg/L 16.7 mg/L Analytical Method: EPA 6 0.019 mg/L 0.0051 mg/L Analytical Method: EPA 3 281 mg/L 0.45 mg/L 6.9 mg/L 120 mg/L Analytical Method: EPA 3 0.0260 U mg/L Analytical Method: SM 4	Results Units PQL	Results Units PQL MDL	Results Units PQL MDL DF	Results Units PQL MDL DF Prepared Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 16.7 mg/L 2.5 0.13 1 05/12/15 08:48 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.019 mg/L 0.0025 0.00056 5 05/13/15 21:04 0.0051 mg/L 0.0025 0.0010 5 05/13/15 21:04 Analytical Method: EPA 300.0 3.0 5 0.5/13/15 21:04 Analytical Method: EPA 300.0 0.0036 1 0.050 0.0036 1 120 mg/L 0.050 0.0036 1 0.050 1 120 mg/L 6.0 3.0 5 0.0026 1 Analytical Method: EPA 350.1 0.026 0.040 0.020 1 0.026 1 Analytical Method: SM 4500-P E 0.040 0.020 1 0.040 0.040 <td< td=""><td>Results Units PQL MDL DF Prepared Analyzed Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 05/12/15 18:17 16.7 mg/L 2.5 0.13 1 05/12/15 08:48 05/12/15 18:17 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.019 mg/L 0.0025 0.00056 5 05/13/15 21:04 05/19/15 10:42 0.0051 mg/L 0.0025 0.0010 5 05/13/15 21:04 05/19/15 10:42 Analytical Method: EPA 300.0 281 mg/L 0.0025 0.0010 5 05/08/15 00:10 0.45 mg/L 0.050 0.0036 1 05/07/15 16:42 6.9 mg/L 0.10 0.050 1 05/07/15 16:42 120 mg/L 6.0 3.0 5 05/08/15 00:10 Analytical Method: EPA 350.1 0.040 0.020 1 05/19/15 12:45 Analytical Method: SM 4500-P E 0.040</td></td<> <td>Results Units PQL MDL DF Prepared Analyzed CAS No. Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 05/12/15 18:17 7440-43-9 16.7 mg/L 2.5 0.13 1 05/12/15 08:48 05/12/15 18:17 7440-09-7 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.019 mg/L 0.0025 0.00056 5 05/13/15 21:04 05/19/15 10:42 7440-38-2 0.0051 mg/L 0.0025 0.0010 5 05/13/15 21:04 05/19/15 10:42 7482-49-2 Analytical Method: EPA 300.0 281 mg/L 0.050 0.0036 1 05/08/15 00:10 16887-00-6 0.45 mg/L 0.050 0.0036 1 05/07/15 16:42 16984-48-8 6.9 mg/L 0.10 0.050 1 05/07/15 16:42 14797-55-8 120 mg/L 6.0 3.0 5 05/08/15 00:10 14808-79-8 <!--</td--></td>	Results Units PQL MDL DF Prepared Analyzed Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 05/12/15 18:17 16.7 mg/L 2.5 0.13 1 05/12/15 08:48 05/12/15 18:17 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.019 mg/L 0.0025 0.00056 5 05/13/15 21:04 05/19/15 10:42 0.0051 mg/L 0.0025 0.0010 5 05/13/15 21:04 05/19/15 10:42 Analytical Method: EPA 300.0 281 mg/L 0.0025 0.0010 5 05/08/15 00:10 0.45 mg/L 0.050 0.0036 1 05/07/15 16:42 6.9 mg/L 0.10 0.050 1 05/07/15 16:42 120 mg/L 6.0 3.0 5 05/08/15 00:10 Analytical Method: EPA 350.1 0.040 0.020 1 05/19/15 12:45 Analytical Method: SM 4500-P E 0.040	Results Units PQL MDL DF Prepared Analyzed CAS No. Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/12/15 08:48 05/12/15 18:17 7440-43-9 16.7 mg/L 2.5 0.13 1 05/12/15 08:48 05/12/15 18:17 7440-09-7 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.019 mg/L 0.0025 0.00056 5 05/13/15 21:04 05/19/15 10:42 7440-38-2 0.0051 mg/L 0.0025 0.0010 5 05/13/15 21:04 05/19/15 10:42 7482-49-2 Analytical Method: EPA 300.0 281 mg/L 0.050 0.0036 1 05/08/15 00:10 16887-00-6 0.45 mg/L 0.050 0.0036 1 05/07/15 16:42 16984-48-8 6.9 mg/L 0.10 0.050 1 05/07/15 16:42 14797-55-8 120 mg/L 6.0 3.0 5 05/08/15 00:10 14808-79-8 </td



Project:

FMC RCRA

Pace Project No.:

10305190

Sam	ple:	50513	31

Date: 05/20/2015 03:30 PM

Lab ID: 10305190019

Collected: 05/06/15 10:40

Received: 05/07/15 10:15

15 Matrix: Water

Sample: 505131	Lab ID:	030519001	9 Collecte	d: 05/06/15	5 10:40	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium Potassium	0.000900) + 13.6	mg/L mg/L	0.0030 2.5	0.00065 0.13	1	05/12/15 08:48 05/12/15 08:48	05/12/15 18:48 05/12/15 18:48	7440-43-9 7440-09-7	
6010 MET ICP, Dissolved	Analytical N	Method: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium, Dissolved Potassium, Dissolved	0.0025Û) 13.7	mg/L mg/L	0.0030 2.5	0.00065 0.13	1	05/20/15 10:32 05/20/15 10:32	05/20/15 11:29 05/20/15 11:29	7440-43-9 7440-09-7	
6020 MET ICPMS	Analytical N	lethod: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic Selenium	0.049 0.00086 🗗	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/13/15 21:04 05/13/15 21:04	05/19/15 11:19 05/19/15 11:19	7440-38-2 7782-49-2	
6020 MET ICPMS, Dissolved	Analytical N	lethod: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic, Dissolved Selenium, Dissolved	0.050 0.00083 🕠	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/17/15 21:50 05/17/15 21:50	05/20/15 12:14 05/20/15 12:14		
SM4500F-C Fluoride	Analytical N	Method: SM	4500F/C						
Fluoride	0.13()U	mg/L	1.0	0.051	1		05/09/15 11:36	16984-48-8	В
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride Fluoride Nitrate as N Sulfate	196 -74:8 0.056 167	mg/L J mg/L mg/L mg/L	6.0 2.5 0.10 6.0	3.0 0.18 0.050 3.0	5 50 1 5		05/08/15 01:52 05/08/15 10:24 05/07/15 18:28 05/08/15 01:52	16984-48-8 14797-55-8	
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	0.0370	mg/L	0.040	0.020	1		05/19/15 12:49	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM	4500-P E						
Orthophosphate as P	6.1	mg/L	0.25	0.087	50		05/07/15 15:05		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505147

Date: 05/20/2015 03:30 PM

Lab ID: 10305190012 Collected: 05/05/15 18:05 Received: 05/07/15 10:15 Matrix: Water

	7-7-67	2002/02/02				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical M	lethod: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:03	7440-43-9	
Potassium	12.1	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:03	7440-09-7	
6020 MET ICPMS	Analytical M	lethod: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.0046	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:28	7440-38-2	
Selenium	0.0041 1	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:28	7782-49-2	
300.0 IC Anions	Analytical M	lethod: EPA	300.0						
Chloride	153	mg/LJ-	6.0	3.0	5		05/07/15 22:47	16887-00-6	
Fluoride	0.70	mg/L	0.050	0.0036	1		05/07/15 15:09	16984-48-8	
Nitrate as N	4.4	mg/L	0.10	0.050	1		05/07/15 15:09	14797-55-8	
Sulfate	66.5	mg/L	1.2	0.60	1		05/07/15 15:09	14808-79-8	
350.1 Ammonia	Analytical M	lethod: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:41	7664-41-7	
Phosphate, Ortho Low Level	Analytical M	lethod: SM 4	500-P E						
Orthophosphate as P	0.033	mg/L	0.0050	0.0017	1		05/07/15 14:53		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505148

Date: 05/20/2015 03:30 PM

Lab ID: 10305190013

Collected: 05/05/15 18:45 Received: 05/07/15 10:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA	6010 Prepa	ration Metho	od: EP	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:08	7440-43-9	
Potassium	13.4	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:08	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA	6020 Prepa	ration Metho	d: EP	A 3020			
Arsenic	0.0072	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:33	7440-38-2	
Selenium	0.0057	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:33	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA	300.0						
Chloride	163	mg/L3	6.0	3.0	5		05/07/15 23:05	16887-00-6	
Fluoride	0.76	mg/L	0.050	0.0036	1		05/07/15 15:24	16984-48-8	
Nitrate as N	3.6	mg/L	0.10	0.050	1		05/07/15 15:24	14797-55-8	
Sulfate	89.8	mg/L	1.2	0.60	4		05/07/15 15:24	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:42	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	0.062	mg/L	0.0050	0.0017	9		05/07/15 14:53		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505149

Lab ID: 10305190014

Collected: 05/05/15 19:25

Received: 05/07/15 10:15

15 Matrix: Water

Sample: 505149	Lab ID:	10305190014	Collecte	d: 05/05/15	19:25	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	0.00075	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:12	7440-43-9	
Potassium	11.7	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:12	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EP/	A 3020			
Arsenic	0.0068	mg/L	0.0010	0.00023	2	05/13/15 21:04	05/19/15 10:37	7440-38-2	
Selenium	0.0020	mg/L	0.0010	0.00040	2	05/13/15 21:04	05/19/15 10:37	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	114	mg/L J	6.0	3.0	5		05/07/15 23:22	16887-00-6	
Fluoride	1.0	mg/L	0.050	0.0036	1		05/07/15 15:39	16984-48-8	
Nitrate as N	2.0	mg/L	0.10	0.050	1		05/07/15 15:39	14797-55-8	
Sulfate	59.4	mg/L	1.2	0.60	1		05/07/15 15:39	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:43	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	0.064	ma/L	0.0050	0.0017	1		05/07/15 14:54		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505154

Date: 05/20/2015 03:30 PM

Lab ID: 10305190003

Collected: 05/05/15 10:55 Received: 05/06/15 10:00 Matrix: Water

Sample: 505154	Lab ID:	10305190003	Collecte	u. 05/05/15	10,55	Received. Usi	00/15 TU.00 IVI	inix. vvatei	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA	6010 Prepa	ration Metho	od: EP	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 14:57	7440-43-9	
Potassium	14.4 J	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 14:57	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.0043	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:36	7440-38-2	
Selenium	0.0032	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:36	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride	190	mg/L J	6.0	3.0	5		05/06/15 19:26	16887-00-6	
Fluoride	1.0	mg/L	0.050	0.0036	1		05/06/15 15:46	16984-48-8	
Nitrate as N	2.8	mg/L	0.10	0.050	1		05/06/15 15:46	14797-55-8	
Sulfate	55.7	mg/L	1.2	0.60	1		05/06/15 15:46	14808-79-8	
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:09	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 4	1500-P E						
Orthophosphate as P	0.025	mg/L	0.0050	0.0017	1		05/06/15 13:45		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505171

Lab ID: 10305190007

Collected: 05/05/15 13:25 Received: 05/06/15 10:00 Matrix: Water

200									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA	6010 Prepa	ration Metho	od: EP	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:28	7440-43-9	
Potassium	22.6 🗓	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:28	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.018	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:08	7440-38-2	
Selenium	0.0027	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:08	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride	193	mg/L I	6.0	3.0	5		05/06/15 21:40	16887-00-6	
Fluoride	0.54	mg/L	0.050	0.0036	1		05/06/15 16:47	16984-48-8	
Nitrate as N	5.4	mg/L	0.10	0.050	1		05/06/15 16:47	14797-55-8	
Sulfate	88.9	mg/L	1.2	0.60	1		05/06/15 16:47	14808-79-8	
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:15	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 4	500-P E						
Orthophosphate as P	0.10	mg/L	0.0050	0.0017	1		05/06/15 13:50		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505172

Date: 05/20/2015 03:30 PM

Lab ID: 10305190010 Collected: 05/05/15 15:50 Received: 05/06/15 10:00 Matrix: Water

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Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium	ND ,	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:41	7440-43-9	
Potassium	25.7 🏋	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:41	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.021	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:21	7440-38-2	
Selenium	0.0037	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:21	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride	119	mg/L J	12.0	6.0	10		05/06/15 21:58	16887-00-6	
Fluoride	0.59	mg/L	0.050	0.0036	1		05/06/15 18:02	16984-48-8	
Nitrate as N	8.4	mg/L	1.0	0.50	10		05/06/15 21:58	14797-55-8	
Sulfate	73.9	mg/L	1.2	0.60	1		05/06/15 18:02	14808-79-8	M1
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:18	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 4	1500-P E						
Orthophosphate as P	0.30	mg/L	0.025	0.0087	5		05/06/15 14:01		



Project:

FMC RCRA

Pace Project No.:

10305190

	7		1000	
0	amr	lo:	505	172

Lab ID: 10305190006

Collected: 05/05/15 12:35

Received: 05/06/15 10:00 M

Matrix: Water

Sample: 505173	Lab ID: 1	0305190006	Collecte	d: 05/05/15	12:35	Received: 05/	06/15 10:00 Ma	itrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical M	Method: EPA	6010 Prepa	ration Metho	od: EP/	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:23	7440-43-9	
Potassium	14.0 J	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:23	7440-09-7	
6020 MET ICPMS	Analytical M	Method: EPA	6020 Prepa	ration Metho	od: EP/	A 3020			
Arsenic	0.0032	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:03	7440-38-2	
Selenium	0.0046	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:03	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride	218	mg/LJ-	6.0	3.0	5		05/06/15 21:23	16887-00-6	
Fluoride	0.84	mg/L	0.050	0.0036	1		05/06/15 16:32	16984-48-8	
Nitrate as N	3.5	mg/L	0.10	0.050	1		05/06/15 16:32	14797-55-8	
Sulfate	66.7	mg/L	1.2	0.60	1		05/06/15 16:32	14808-79-8	
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:14	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 4	1500-P E						
Orthophosphate as P	0.022	mg/L	0.0050	0.0017	1		05/06/15 13:47		



Project:

FMC RCRA

Pace Project No.:

10305190

1 acc 1 1c	Ject No	105051
Sample:	505174	

Lab ID: 10305190001

Collected: 05/05/15 09:30

Received: 05/06/15 10:00

00 Matrix: Water

Sample: 505174	Lab ID:	10305190001	Collecte	d: 05/05/15	5 09:30	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA 6	6010 Prepa	ration Meth	od: EP/	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 14:26	7440-43-9	
Potassium	12.8 🗍	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 14:26	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP/	A 3020			
Arsenic	0.0035	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:08	7440-38-2	
Selenium	0.0049	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:08	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride	190	mg/L 3	6.0	3.0	5		05/06/15 18:50	16887-00-6	
Fluoride	0.77	mg/L	0.050	0.0036	1		05/06/15 15:16	16984-48-8	
Nitrate as N	4.7	mg/L	0.10	0.050	1		05/06/15 15:16	14797-55-8	
Sulfate	93.8	mg/L	1.2	0.60	1		05/06/15 15:16	14808-79-8	
350.1 Ammonia	Analytical I	Method: EPA:	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:07	7664-41-7	
Phosphate, Ortho Low Level	Analytical I	Method: SM 4	500-P E						
Orthophosphate as P	0.028	mg/L	0.0050	0.0017	1		05/06/15 13:41		

05/19/15 12:09 7664-41-7

05/06/15 13:44



ANALYTICAL RESULTS

Project:

FMC RCRA

Pace Project No.:

350.1 Ammonia

Nitrogen, Ammonia

Orthophosphate as P

Phosphate, Ortho Low Level

10305190

Sample: 505177	Lab ID:	10305190002	Collected	1: 05/05/1	5 10:15	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical I	Method: EPA 6	010 Prepar	ation Meth	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 14:52	7440-43-9	
Potassium	13.3 Ţ	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 14:52	7440-09-7	
6020 MET ICPMS	Analytical I	Method: EPA 6	020 Prepar	ation Meth	od: EPA	3020			
Arsenic	0.0042	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:13	7440-38-2	
Selenium	0.0042	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:13	7782-49-2	
300.0 IC Anions	Analytical I	Method: EPA 3	0.00						
Chloride	169	mg/L J-	6.0	3.0	5		05/06/15 19:08	16887-00-6	
Fluoride	0.72	mg/L	0.050	0.0036	1		05/06/15 15:31	16984-48-8	
Nitrate as N	4.2	mg/L	0.10	0.050	1		05/06/15 15:31	14797-55-8	
Sulfate	71.6	mg/L	1.2	0.60	1		05/06/15 15:31	14808-79-8	

0.040

0.0050

0.020

0.0017

Analytical Method: EPA 350.1

mg/L

Analytical Method: SM 4500-P E

mg/L

0.028



Project:

FMC RCRA

Pace Project No.:

10305190

Samp	le:	5051	78

Lab ID: 10305190

Collected: 05/05/15

Received: 05/

15 10:00 Matrix: Water

Sample: 505178	Lab ID: 1	10305190004	Collecte	d: 05/05/15	11:35	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium Potassium	ND 24.3 J	mg/L mg/L	0.0030 2.5	0.00065 0.13	1	05/07/15 09:41 05/07/15 09:41	05/07/15 15:10 05/07/15 15:10		
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic Selenium	0.0088	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/08/15 08:08 05/08/15 08:08	05/13/15 18:54 05/13/15 18:54		
SM4500F-C Fluoride	Analytical N	Method: SM 4	500F/C						
Fluoride	0.29(1)	mg/L	1.0	0.051	1		05/09/15 11:27	16984-48-8	В
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride Fluoride Nitrate as N Sulfate	565 0.30 5.7 374	mg/L mg/L mg/L mg/L	12.0 0.050 0.10 12.0	6.0 0.0036 0.050 6.0	10 1 1 10		05/06/15 19:43 05/06/15 16:01 05/06/15 16:01 05/06/15 19:43	16984-48-8 14797-55-8	
350.1 Ammonia	Analytical N	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:11	7664-41-7	
Phosphate, Ortho Low Level	Analytical M	Method: SM 4	500-P E						
Orthophosphate as P	0.039	mg/L	0.0050	0.0017	1		05/06/15 13:46		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505180	Lab ID:	10305190011	Collecte	d: 05/05/15	17:15	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EP/	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 17:56	7440-43-9	
Potassium	32.8	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 17:56	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.044	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:24	7440-38-2	
Selenium	0.0044	mg/LJ+	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:24	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	130	mg/L J	12.0	6.0	10		05/07/15 15:56	16887-00-6	
Fluoride	0.48	mg/L	0.050	0.0036	1		05/07/15 14:54	16984-48-8	
Nitrate as N	42.6	mg/L	1.0	0.50	10		05/07/15 15:56	14797-55-8	
Sulfate	129	mg/L	12.0	6.0	10		05/07/15 15:56	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	0.44	mg/L	0.025	0.0087	5		05/07/15 15:04		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample:	505600

Date: 05/20/2015 03:30 PM

Lab ID: 103051900

Collected: 05/05/15 11:55

Received: 05/06/15 10:00

Matrix Water

Sample: 505600	Lab ID: 1	030519000	5 Collecte	d: 05/05/15	11:55	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical M	lethod: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium Potassium	ND 22.9 J	mg/L mg/L	0.0030 2.5	0.00065 0.13	1	05/07/15 09:41 05/07/15 09:41	05/07/15 15:16 05/07/15 15:16		
6020 MET ICPMS	Analytical M	lethod: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic Selenium	0.0088 0.0058	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/08/15 08:08 05/08/15 08:08	05/13/15 18:59 05/13/15 18:59	7440-38-2 ` 7782-49-2	
SM4500F-C Fluoride	Analytical M	lethod: SM	4500F/C						
Fluoride	0.280 U	mg/L	1.0	0.051	1		05/09/15 11:32	16984-48-8	В
300.0 IC Anions	Analytical M	lethod: EPA	300.0						
Chloride Fluoride Nitrate as N Sulfate	581 0.30 5.7 388	mg/L 🎝 ' mg/L mg/L mg/L	12.0 0.050 0.10 12.0	6.0 0.0036 0.050 6.0	10 1 1 10		05/06/15 20:18 05/06/15 16:16 05/06/15 16:16 05/06/15 20:18	16984-48-8 14797-55-8	
350.1 Ammonia	Analytical M	lethod: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:13	7664-41-7	
Phosphate, Ortho Low Level	Analytical M	ethod: SM	4500-P E						
Orthophosphate as P	0.039	mg/L	0.0050	0.0017	1		05/06/15 13:47		



Project:

FMC RCRA

Pace Project No.:

10305190

Sample: 505700

Lab ID: 10305190009

Collected: 05/05/15 15:20 Received: 05/06/15 10:00 Matrix: Water

Sample. 303700	Lab ID.	1030519000	Collecte	a. Uş/Us/1;	15.20	Received. US/	06/15 10:00 IVI	atrix. vvater	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:37	7440-43-9	
Potassium	ND	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:37	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.000210	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:17	7440-38-2	
Selenium	ND	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:17	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA	300.0						
Chloride	ND	mg/L	1.2	0.60	1		05/06/15 17:47	16887-00-6	
Fluoride	ND	mg/L	0.050	0.0036	1		05/06/15 17:47	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		05/06/15 17:47	14797-55-8	
Sulfate	ND	mg/L	1.2	0.60	1		05/06/15 17:47	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA	350.1						
Nitrogen, Ammonia	0.021①	mg/L	0.040	0.020	1		05/19/15 12:16	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM	4500-P E						
Orthophosphate as P	0.0025	mg/L	0.0050	0.0017	1		05/06/15 13:52		



Project:

FMC RCRA

ND

mg/L

Pace Project No.:

Orthophosphate as P

10305190

Sample: 505CDI	Lab ID:	10305190008	Collecte	d: 05/05/15	13:50	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:32	7440-43-9	
Potassium	ND	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:32	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	ND	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:12	7440-38-2	
Selenium	ND	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:12	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	ND	mg/L	1.2	0.60	1		05/06/15 17:02	16887-00-6	
Fluoride	ND	mg/L	0.050	0.0036	1		05/06/15 17:02	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		05/06/15 17:02	14797-55-8	
Sulfate	ND	mg/L	1.2	0.60	1		05/06/15 17:02	14808-79-8	
350.1 Ammonia	Analytica	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:16	7664-41-7	
Phosphate, Ortho Low Level	Analytica	Method: SM 45	500-P E						

0.0050

0.0017

05/06/15 13:51



TECHNICAL REVIEW ACTION SUMMARY SDG 10305190

Arsenic J1

Cadmium J1, J+1

Potassium J2

Selenium J+1

If the field is left blank no actions or qualifications were necessary.

 Positive result is flagged as estimated (J) due to uncertainty at the low level.

 Result is flagged as estimated (J) due to non-compliant serial dilution reproducibility.

J+1 - Positive result reported <2PQL is flagged as estimated with the potential for high bias (J+) due to non-compliant CRI recovery.





SAMPLE SUMMARY

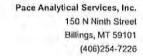
Project:

FMC RCRA

Pace Project No.: 10305190

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
10305190001	505174	Water	05/05/15 09:30	05/06/15 10:00	
10305190002	505177	Water	05/05/15 10:15	05/06/15 10:00	
10305190003	505154	Water	05/05/15 10:55	05/06/15 10:00	
10305190004	505178	Water	05/05/15 11:35	05/06/15 10:00	
10305190005	505600	Water	05/05/15 11:55	05/06/15 10:00	
10305190006	505173	Water	05/05/15 12:35	05/06/15 10:00	
10305190007	505171	Water	05/05/15 13:25	05/06/15 10:00	
10305190008	505CDI	Water	05/05/15 13:50	05/06/15 10:00	
10305190009	505700	Water	05/05/15 15:20	05/06/15 10:00	
10305190010	505172	Water	05/05/15 15:50	05/06/15 10:00	
10305190011	505180	Water	05/05/15 17:15	05/07/15 10:15	
10305190012	505147	Water	05/05/15 18:05	05/07/15 10:15	
10305190013	505148	Water	05/05/15 18:45	05/07/15 10:15	
10305190014	505149	Water	05/05/15 19:25	05/07/15 10:15	
10305190015	505128	Water	05/06/15 07:55	05/07/15 10:15	
10305190016	505127	Water	05/06/15 08:30	05/07/15 10:15	
10305190017	505126	Water	05/06/15 09:05	05/07/15 10:15	
10305190018	505124	Water	05/06/15 09:50	05/07/15 10:15	
10305190019	505131	Water	05/06/15 10:40	05/07/15 10:15	
10305190020	505114ABC	Water	05/06/15 13:30	05/07/15 10:15	







Project:

FMC RCRA

Pace Project No.:

10305190

Method:

EPA 6010

Description: 6010 MET ICP

Client:

FMC

Date:

May 20, 2015

General Information:

20 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

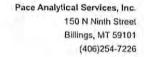
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: Pace Project No .: 10305190

FMC RCRA

Method:

EPA 6010

Description: 6010 MET ICP, Dissolved

Client:

FMC

Date:

May 20, 2015

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

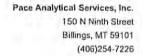
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: Pace Project No.: FMC RCRA 10305190

Method:

EPA 6020

Description: 6020 MET ICPMS

Client:

FMC

Date:

May 20, 2015

General Information:

20 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project:

FMC RCRA

Pace Project No.:

10305190

Method:

EPA 6020

Description: 6020 MET ICPMS, Dissolved

Client:

FMC

Date:

May 20, 2015

General Information:

1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

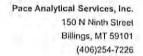
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project:

FMC RCRA

Pace Project No.:

10305190

Method:

SM 4500F/C

Description: SM4500F-C Fluoride

Client:

FMC

Date:

May 20, 2015

General Information:

4 samples were analyzed for SM 4500F/C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: WET/41683

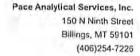
- B: Analyte was detected in the associated method blank.
 - · BLANK for HBN 353704 [WET/4168 (Lab ID: 1960611)
 - · Fluoride

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: Pace Project No.: FMC RCRA 10305190

Method:

EPA 300.0

Description: 300.0 IC Anions

Client:

FMC

Date:

May 20, 2015

General Information:

20 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22728

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305190010

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- · MS (Lab ID: 1957263)
 - · Sulfate
- · MSD (Lab ID: 1957264)
 - · Sulfate

QC Batch: WETA/22749

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10304479002,10305190020

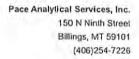
M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- · MS (Lab ID: 1958344)
 - · Chloride
 - Fluoride
- · MSD (Lab ID: 1958345)
 - · Chloride
 - Fluoride
- MSD (Lab ID: 1958347)
 - · Nitrate as N

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..





Project:

FMC RCRA

Pace Project No.:

10305190

Method:

EPA 350.1 Description: 350.1 Ammonia

Client:

FMC

Date:

May 20, 2015

General Information:

20 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

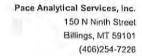
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: Pace Project No.: FMC RCRA 10305190

Method:

SM 4500-P E

Description: Phosphate, Ortho Low Level

Client:

FMC

Date:

May 20, 2015

General Information:

20 samples were analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.





DF-CUSTODY / Analytical Request Document

ustody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

SIGNS (30 The Chain-of-Cu

www.peccass.com	S&15 BP	the district desired is a table of contact to the foreign finds finds the compress according.	10205190
Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information.	yo Sade:
Company: FMC	Report To: Ericka Vallance, Hydrometrics	Attention: Brian McGinnis	Principal of the state of the s
Address: PO BOX 4111	Copy To: Rob Hartman, MWH	Company Name: FMC	REGULATORY AGENCY
POCATELLO, ID 83202	Bruce Wallin, ECCi	Acdress: PO BOX 4111 POCATELLO ID 83202	NPDES CROUND WATER T DRINKING WATER
Email To: brian.mcginnis@fmc.com	Purchase Order No.	Pace Quote Reference:	T UST & RCRA T OTHER
Phone: Fax:	Project Name: FMC	Pace Project Kabor Xiong	Site Location
Requested Due Date/TAT:	Project Number: RCRA-CERCLA-CALCINER	Pace Profile #.	STATE:

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3, 121, 122 &	8	- Cl. SO4, Nitrate, F.	Wall	40	Carre	144	amon	200		\$	83	41	3	w	GL.	Dila	_		2 1	Voc		300	40		,	X	X
Phos sub to Pace-VM by 6010 only on wells 108, 121, 122 &	6	.admum, Potassium; 5020. Arsenic, Selenium									}	1							_								
	n.	nos sub to Pace-VM by 6010 only on wells 108, 121, 122 &							\vdash		+								1		-						
CANDI TO NAME AND CLONATION						CAMP	DWAN GE	AND SIGNA	100			1	4.3			16				i i	-	100	120		-	pa	10

F-ALL-Q-020rev.08, 12-Oct-2007

Samples Intact (V/V)

Custody Seater Cooler (Y/N)

Received on Ico (YIN)

Lemb a. C

5/15/15

DATE Signed __(MM/DD/YY):

Crawe

Valler

SIGNATURE of SAMPLER: PRINT Name of SAMPLER:

Page 52 of 55

Indicast Nove By signing this form you are accepting Pace's NET 30 day payment terms and agreems to late charges of 5.5% por month for any invoices not pala within 30 days.

Pace Analytical

hold, incorrect preservative, out of temp, incorrect containers).

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.13 Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority: Pace Minnesota Quality Office

Sample Condition Client Name:			Project	" WO#: 10305190
-MC				MANAGE . T. AND AND TO THE
ourier: Fed Ex UPS	USPS	P	Client	
Commercial Pace SpeeDee	Other:	-		10305190
Tracking Number: YPB 1611 8475				70303790
Custody Seal on Cooler/Box Present? Ves 🔲 N	o	Seals In	tact?	Yes No Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubble Bags	Non	e [Other:	Temp Blank? Yes No
Thermometer		e of Ice:	Dwe	
Cooler Temp Read (°C): 10 Cooler Temp Co	rrected (°C	1: 4/	G	Biological Tissue Frozen? Yes No No
emp should be above freezing to 6°C Correction Fac		50	Da	te and Initials of Person Examining Contents: 5/6/15
SDA Regulated Soil (N/A, water sample)	Maria de			
d samples originate in a quarantine zone within the United S, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)?	States: AL,	AR, AZ, C		
	gulated Soil	Checkli	Yes ist (F-MN	No including Hawaii and Puerto Rico)? Yes NoQ-338) and include with SCUR/COC paperwork.
				COMMENTS:
hain of Custody Present?	⊠ Yes	□No	□N/A	1.
hain of Custody Filled Out?	Lives	□No	□N/A	2.
hain of Custody Relinquished?	Aves	□No	□N/A	3.
ampler Name and/or Signature on COC?	Yes	□No	□N/A	4.
amples Arrived within Hold Time?	ZYes	□No	□N/A	5.
hort Hold Time Analysis (<72 hr)?	Ø Yes	□No	□N/A	6.
ush Turn Around Time Requested?	Yes	ZNO	□N/A	7.
ufficient Volume?	Zíves	□No	□N/A	8.
orrect Containers Used?	Zyes	□No	□N/A	9.
-Pace Containers Used?	Vives	□No	□N/A	
ontainers Intact?	Yes	□No	□N/A	10.
Iltered Volume Received for Dissolved Tests?	□Yes	□No	ZN/A	11. Note if sediment is visible in the dissolved container
ample Labels Match COC?	Yes	□No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	-		La. 40	
Il containers needing acid/base preservation have been				12 Vi Huno V Diviso
hecked? Il containers needing preservation are found to be in	Payes	□No	□N/A	13. V. □HNO3 V. □H₂SO4 □NBOH □HCI
ompliance with EPA recommendation?				Sample # O (O)
HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	Yes	[]No	□N/A	
xceptions: VOA, Coliform, TOC, Oil and Grease, RO/8015 (water) DOC	□ Vas	Harr	(35.4.	Initial when Lot # of added
eadspace in VOA Vials (>6mm)?	☐Yes ☐Yes	□No	IN/A	completed: preservative:
rip Blank Present?	[]Yes	□No	EN/A	15.
rip Blank Custody Seals Present?	Yes	□No	ZN/A	
ace Trip Blank Lot # (if purchased):		-	Acres 1117	
CLIENT NOTIFICATION/RESOLUTION				Field Data Required? Yes No
erson Contacted:				Date/Time:
Comments/Resolution:	-			
Λ.				

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT, All relevant fields must be completed accurately.

Section B Required Project Information:

10305190

Company	Required Client Information: Company: FMC	Required Project Information: Recort To: Exists Vallage	oject Im	Vollagen	15	and in con-			Invoice	Cumo	Gon:					r			Page:	-	jo		
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Address:	PO BOX 4111	Copy To: R	Rob Ha	Rob Hartman, MWH	IWH				Сощря	Company Name:	E FMC					REG	ULATO	REGULATORY AGENCY.	NCY			1818 E	
	POCATELLO, ID 83202	т.	Sruce \	Bruce Wallin, ECCI	CCI				Address:		PO BO)	PO BOX 4111 POCATELLO ID 83202	POCAT	ELLOI	D 8320		NPDES	7	GROUND WATER	WATER	DRIN	DRINKING WATER	ER
Email Yo:	brian.mcginnis@fmc.com	Purchase Order No.:	der No.:						Pace Quote	age						L	UST	15	RCRA		T OTHER	œ	
Phone:	Fac	Project Name:	E FMC	AC.					Pace F	1	Kabor Xiong	iong				Site	Site Location	L		11111	THININ .	THINING.	THE PARTY OF THE P
ednestee	Requested Due Date/TAT:	Project Number		RCRA-CERCLA-CALCINER	CLA-C	ALCINE	oz.		Pace P	office at							STATE	(Audi)	<u>Q</u>				
													947	Rec	uested	Analy	sis Filt	Requested Analysis Filtered (Y/N)	0				
v) ě	Section D Valid Matrix Codes Required Circui Information MATRIX CO	u)			8	COLLECTED	Д			T.	Preservatives	fives	1 N/A										
			CECA VIIIO COGOS		START		COMPOSITE	OLLECTION	S				1		0109		Sr	K212471		(N/A)			
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	- ADDITIONAL COMMENTS	RE	ELINQU	RELINQUISHED BY LAFFILIATION	LAFFILIA	NOL		DATE	TIME	ш		ACCEP	ACCEPTED BY LAFFILIATION	AFFILIA	VIION	* 10	DATE	TIME	79.5	1S	SAMPLECONDITIONS	DITIONS	
20.0-Ci,	*20.0-Cl, SO4, Mirate, F	Walter		Cane	Hydrame	Smet	Spire	SIIG	15.2	123	83	949		OXC		10	51/45	10,15	in'	×	7	7	
0: Cadm	6010: Cadmium, Potassium, 6020: Arscriic, Selenium				-					-		7		1		-	1				-		
Total Phas s	Total Pros sub to Proce-VM by 6010 only on wells 108, 121, 122 & 123.	105														+			1				
4	discolund motals	Wiere	1		SAMPL	ER NAM	SAMPLER NAME AND SIGNATURE	SNATURE								- (1)- (1)- (2)- (2)-			76	U	pe.		in.
Rage !	Gel AT	red				PRINT	PRINT Name of SAMPLER:	MPLER:	1	3	Sal	ter.	7	Tane	0				o. u. dine	colved o	ody Sen oler (Y/N	and suite	(N/A)
54						SIGNAT	IATURE of SAMPLER:	MPLER:	AlG	7	V / V	300	1	DAIL Signed	1.0	20	21/1/20	1	- T	1 1 1	Co		me

Pace Analytical

Document Name: Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.13 Document Revised: 23Feb2015
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Sample Condition Client Name: Upon Receipt			Projec	t#:
FMC				WO#: 10305190
ourier: Fed Ex DUPS	USPS		Client	MOM . TODOOTOO
Commercial Pace SpeeDee	Other:_			01 0 L 1 L 0 L V R DL 4 DD 1 L 1 L DL D
Tracking Number: 8058 698 8486		_		10205100
Custody Seal on Cooler/Box Present? Yes]No s	eals In	tact?	7/es 10305190
Packing Material: Bubble Wrap Bubble Ba	gs None		Other:_	Temp Blank? ☐Yes ☐No
Thermometer 888A9130516413 B88A91216 Used: B88A01433	7504 Type	of Ice:	D w	
	Corrected (°C);	5.	1	두 이번 시간 회사들이 되었다. 그렇게 하고 있으므로 그리고 있다면 하다 하였다.
emp should be above freezing to 6°C Correction F		0,3	Da	Biological Tissue Frozen? Yes No ZN/A te and Initials of Person Examining Contents: 5/7/(5 B)
SDA Regulated Soil (N/A, water sample)				
d samples originate in a quarantine zone within the Unit S, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)?	ed States: AL, A	R, AZ, C		ID, LA. Dld samples originate from a foreign source (internationally,
if Yes to either question, fill out a f	Populated Sail	Chockli	☐Yes	No including Hawaii and Puerto Ricol?
quality in out a	regulated 5011	CHECKII	Pr (L-IAIIA	-Q-338) and include with SCUR/COC paperwork.
hain of Custody Present?	Ø√es	□No	□N/A	COMMENTS:
Chain of Custody Filled Out?	Wes	□No	□N/A	2.
hain of Custody Relinquished?	Zíves	□No	□N/A	3.
ampler Name and/or Signature on COC?	√Yes	□No	□N/A	4.
amples Arrived within Hold Time?	ZíYes	□No	□N/A	5.
hort Hold Time Analysis (<72 hr)?	□Yes	□No	□N/A	6.
ush Turn Around Time Requested?	Yes	ZNO	□N/A	7.
ufficient Volume?	⊿ Yes	DNo	□N/A	8.
orrect Containers Used?	Yes	□No	□N/A	9.
-Pace Containers Used?	Yes	□No	□N/A	
ontainers Intact?	⊠Yes	□No	□N/A	10.
Itered Volume Received for Dissolved Tests?	✓Yes	□No	□N/A	12. Note if sediment is visible in the dissolved container
ample Labels Match COC?	_ ZYes	□No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	/		17.70	1
Il containers needing acid/base preservation have been necked?	∠Ves	□No	Davis	13. ⟨ ☑HNO₃ ⟨ ☑H₂SO₄ ☐NaOH ☐HCI
I containers needing preservation are found to be in	Æ]res	_140	□N/A	Sample # 01-12
ompliance with EPA recommendation? INO3, H2SO4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	Yes	CIN-	Chin	21-12
ceptions: VOA, Coliform, TOC, Oil and Grease,	Tres	□No	□N/A	Initial when Lot # of added
RO/8015 (water) DOC	□Yes	□No	N/V	completed: preservative:
eadspace in VOA Vials (>6mm)?	12.0	□No	ØN/A	14,
ip Blank Present? ip Blank Custody Seals Present?		□No	ØN/A	15.
oce Trip Blank Lot # (If purchased):	□Yes	Пио	ØN/A	
CLIENT NOTIFICATION/RESOLUTION				
erson Contacted:		0		Field Data Required? Yes No
omments/Resolution:				Date/Time:
to the same and th				
	-			
	^			

DATA PACKAGE REPORT
SAMPLE DELIVERY GROUP
RCRA SDG
10305724



Project:

FMC RCRA

Pace Project No.: 103

Date: 05/26/2015 02:34 PM

10305724

Sample: 505BTS

Lab ID: 10305724001

Collected: 05/07/15 17:05

Received: 05/09/15 09:09

5 Matrix: Water

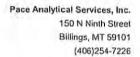
Lab ID:	10305724001	Collecte	d: 05/07/15	17:05	Received: 05/	09/15 09:05 Ma	atrix: Water	
Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EP/	3010			
ND	mg/L	0.0030	0.00065	1	05/14/15 09:16	05/14/15 12:36	7440-43-9	
5.9	mg/L	2.5	0.13	1	05/14/15 09:16	05/14/15 12:36	7440-09-7	
Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
0.0044	mg/L	0.00050	0.00011	1	05/13/15 21:04	05/19/15 12:23	7440-38-2	
0.0010	mg/L	0.00050	0.00020	1	05/13/15 21:04	05/19/15 12:23	7782-49-2	
Analytical	Method: EPA 3	0.00						
30.2	mg/L	1.2	0.60	1		05/09/15 16:16	16887-00-6	
0.53	mg/L	0.050	0.0036	1		05/09/15 16:16	16984-48-8	
2.8	mg/L	0.10	0.050	1		05/09/15 16:16	14797-55-8	
59.9	mg/L	1.2	0.60	1		05/14/15 16:14	14808-79-8	
Analytical	Method: EPA 3	50.1						
ND	mg/L	0.040	0.020	1		05/21/15 11:25	7664-41-7	
Analytical	Method: SM 45	500-P E						
0.73	mg/L	0.050	0.017	10		05/09/15 13:29		M6
	Analytical ND 5.9 Analytical 0.0044 0.0010 Analytical 30.2 0.53 2.8 59.9 Analytical ND Analytical	Analytical Method: EPA 6 ND mg/L 5.9 mg/L Analytical Method: EPA 6 0.0044 mg/L 0.0010 mg/L Analytical Method: EPA 3 30.2 mg/L 0.53 mg/L 2.8 mg/L 59.9 mg/L Analytical Method: EPA 3 ND mg/L Analytical Method: SM 48	Results Units PQL Analytical Method: EPA 6010 Preparent ND mg/L 0.0030 preparent 0.0030 preparent 5.9 mg/L 2.5 2.5 Analytical Method: EPA 6020 Preparent 0.0044 preparent 0.0044 mg/L 0.00050 preparent 0.00050 preparent Analytical Method: EPA 300.0 30.2 preparent 30.2 mg/L 0.00050 preparent 0.050 preparent 2.8 mg/L 0.050 preparent 0.050 preparent 2.8 mg/L 0.10 preparent 0.050 preparent 30.2 mg/L 0.050 preparent 0.050 preparent 2.8 mg/L 0.10 preparent 0.050 preparent 30.2 mg/L 0.050 preparent 0.050 preparent 2.8 mg/L 0.10 preparent 0.050 preparent 30.2 mg/L 0.050 preparent 0.050 preparent 2.8 mg/L 0.050 preparent 0.050 preparent 30.2 mg/L 0.050 preparent 0.050 preparent	Results Units PQL MDL Analytical Method: EPA 6010 Preparation Methods D.0030 0.00065 0.00065 5.9 mg/L 2.5 0.13 0.13 Analytical Method: EPA 6020 Preparation Methods 0.00050 0.00011 0.00050 0.00011 0.0010 mg/L 0.00050 0.00020 0.00020 Analytical Method: EPA 300.0 30.2 mg/L 1.2 0.60 0.53 mg/L 0.050 0.0036 0.0036 2.8 mg/L 0.10 0.050 0.0050 59.9 mg/L 1.2 0.60 0.60 Analytical Method: EPA 350.1 ND mg/L 0.040 0.020 Analytical Method: SM 4500-P E	Results Units PQL MDL DF Analytical Method: EPA 6010 Preparation Method: EPA 5.9 mg/L 0.0030 0.00065 1 0.00065 1 0.13 1 Analytical Method: EPA 6020 Preparation Method: EPA 0.0044 mg/L 0.00050 0.00011 1 0.0010 mg/L 0.00050 0.00020 1 Analytical Method: EPA 300.0 30.2 mg/L 0.050 0.0036 1 0.53 mg/L 0.050 0.0036 1 0.053 mg/L 0.10 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.050 1 0.000 1 0.050 1 0.000 1 0.000 1 0.000 1 0.000 1 0.000 1 0.000 1 0.0000 1 0.0000 1 0.00000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.00000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.00000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.00000 1 0.00000 1 0.0000 1 0.00000 1 0.0000	Results Units PQL MDL DF Prepared Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/14/15 09:16 5.9 mg/L 2.5 0.13 1 05/14/15 09:16 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.0044 mg/L 0.00050 0.00011 1 05/13/15 21:04 0.0010 mg/L 0.00050 0.00020 1 05/13/15 21:04 Analytical Method: EPA 300.0 30.2 mg/L 1.2 0.60 1 0.53 mg/L 0.050 0.0036 1 2.8 mg/L 0.10 0.050 1 59.9 mg/L 1.2 0.60 1 Analytical Method: EPA 350.1 ND mg/L 0.040 0.020 1 Analytical Method: SM 4500-P E	Results Units PQL MDL DF Prepared Analyzed Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/14/15 09:16 05/14/15 12:36 5.9 mg/L 2.5 0.13 1 05/14/15 09:16 05/14/15 12:36 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.0044 mg/L 0.00050 0.00011 1 05/13/15 21:04 05/19/15 12:23 0.0010 mg/L 0.00050 0.00020 1 05/13/15 21:04 05/19/15 12:23 Analytical Method: EPA 300.0 30.2 mg/L 0.00050 0.00020 1 05/09/15 16:16 0.53 mg/L 0.050 0.0036 1 05/09/15 16:16 2.8 mg/L 0.10 0.050 1 05/09/15 16:16 59.9 mg/L 1.2 0.60 1 05/09/15 16:16 59.9 mg/L 0.040 0.000 1 05/14/15 11:25 <td< td=""><td>Results Units PQL MDL DF Prepared Analyzed CAS No. Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/14/15 09:16 05/14/15 12:36 7440-43-9 5.9 mg/L 2.5 0.13 1 05/14/15 09:16 05/14/15 12:36 7440-09-7 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.0044 mg/L 0.00050 0.00011 1 05/13/15 21:04 05/19/15 12:23 7440-38-2 0.0010 mg/L 0.00050 0.00020 1 05/13/15 21:04 05/19/15 12:23 7782-49-2 Analytical Method: EPA 300.0 30.2 mg/L 1.2 0.60 1 05/09/15 16:16 16887-00-6 0.53 mg/L 0.050 0.0036 1 05/09/15 16:16 16984-48-8 2.8 mg/L 0.10 0.050 1 05/09/15 16:16 14797-55-8 59.9 mg/L 1.2 0.60 1 05/09/15 16:16 14797-55-8 <</td></td<>	Results Units PQL MDL DF Prepared Analyzed CAS No. Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND mg/L 0.0030 0.00065 1 05/14/15 09:16 05/14/15 12:36 7440-43-9 5.9 mg/L 2.5 0.13 1 05/14/15 09:16 05/14/15 12:36 7440-09-7 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.0044 mg/L 0.00050 0.00011 1 05/13/15 21:04 05/19/15 12:23 7440-38-2 0.0010 mg/L 0.00050 0.00020 1 05/13/15 21:04 05/19/15 12:23 7782-49-2 Analytical Method: EPA 300.0 30.2 mg/L 1.2 0.60 1 05/09/15 16:16 16887-00-6 0.53 mg/L 0.050 0.0036 1 05/09/15 16:16 16984-48-8 2.8 mg/L 0.10 0.050 1 05/09/15 16:16 14797-55-8 59.9 mg/L 1.2 0.60 1 05/09/15 16:16 14797-55-8 <



TECHNICAL REVIEW ACTION SUMMARY SDG 10305724

Arsenic
Cadmium
Potassium
Selenium
Phosphorus
If the field is left blank no actions or qualifications were necessary.







SAMPLE SUMMARY

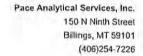
Project:

FMC RCRA

Pace Project No.:

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10305724001	505BTS	Water	05/07/15 17:05	05/09/15 09:05

LABORATORY CASE NARRATIVE





Project:

FMC RCRA

Pace Project No.:

10305724

Method:

EPA 6010

Client:

Description: 6010 MET ICP **FMC**

Date:

May 26, 2015

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:





Project:

FMC RCRA

Pace Project No.:

10305724

Method:

EPA 6020

Description: 6020 MET ICPMS

Client:

FMC

Date:

May 26, 2015

General Information:

1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

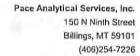
Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:





Project:

FMC RCRA

Pace Project No.:

10305724

Method:

EPA 300.0

Description: 300.0 IC Anions

Client:

FMC

Date:

May 26, 2015

General Information:

1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22770

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305723001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1960678)
 - Fluoride
- · MSD (Lab ID: 1960679)
 - · Fluoride

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- · MS (Lab ID: 1960678)
 - Chloride
 - · Nitrate as N
 - Sulfate
- · MSD (Lab ID: 1960679)
 - Chloride
 - · Nitrate as N
 - Sulfate

Additional Comments:

REPORT OF LABORATORY ANALYSIS





Project: FMC RCRA Pace Project No.: 10305724

Method: EPA 350.1 Description: 350.1 Ammonia

Client: FMC

Date: May 26, 2015

General Information:

1 sample was analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22961

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10306104001,10306165002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1971723)
 - · Nitrogen, Ammonia

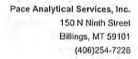
Additional Comments:

Analyte Comments:

QC Batch: WETA/22961

E: Analyte concentration exceeded the calibration range, The reported result is estimated.

- · MS (Lab ID: 1971723)
 - Nitrogen, Ammonia
- MSD (Lab ID: 1971724)
 - Nitrogen, Ammonia





Project:

FMC RCRA

Pace Project No.:

10305724

Method:

SM 4500-P E

Description: Phosphate, Ortho Low Level

Client:

FMC

Date:

May 26, 2015

General Information:

1 sample was analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22771

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305629001,10305724001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- · MS (Lab ID: 1960682)
 - Orthophosphate as P
- · MSD (Lab ID: 1960683)
 - · Orthophosphate as P

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



Face Analytica

Section A Required Chert Information: Company: FMC

Requested Due Date/TAT:

CHAIN-OF-CUSTODY / Analytical Request Document

socurately.	Page:		DEGIII ATODY ACCINCY		I NPDES T GROUND WATER T DRINKING WATER	LUST F RCRA TOTHER	Site Location	STATE.
The Chan-op wish of a LEGAL DOCUMENT, All relevant fields must be completed accurately.	Section C	Attention. Brian McGinnis	Company Name: FMC	A114 DOCATELLO IO 82202	1.	Reference:	Pace Project Kabor Xiong	Pace Profile #:
The Class opening	Section B Required Project Information;	Report To: Ericka Vallance, Hydrometrics	Copy To: Rob Hartman, MWH	Bruce Wallin, ECCI	Purchase Order No.:		Project Name: FMC	Project Number RCRACERCLA-CALCINER
Face Analytical	ent information:	FMC	PO BOX 4111	POCATELLO, ID 83202				bue DaterTAT:

STATE

### AMPLE ID #### AM		Section D	dae	H	H	_					-	-					T	ī	1		-	-			Air hadain action and and		7				
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PRINT Name of SAMPLER: (No Tree C AN & SONS	18							S	GNATURE	SIGNATURE of SAMPLER:	62	Ala	土	P	San	0	1	1	DATE Signed	igned	0	15	00	115	1-		Ten			Cool	duwg

Pace Analytical*

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.13

Document Revised: 23Feb2015 Page 1 of 1 Issuing Authority: Pace Minnesota Quality Office

Sample Condition : Client Name:		Project	" WO#: 103057	724
FAIC			HIR RICHARD RAL WILLIAM B MIN	
프로그리트 네트 시간 프로젝트 이 그는 그 아니라면 그를 하시고 있다. 이 그 이 그래 그리고 있는 것이다.	The second secon	Client		
Commercial Pace SpeeDee Tracking Number: \$067 35947 1614	Other:	_	10305724	Alphagas
Custody Seal on Cooler/Box Present?	Seals	Intact?	Yes No Optional: Proj. D	ie Date: Proj. Name:
Packing Material: Bubble Wrap Bubble Bags	None	Other:	Temp 8	ank? Wes No
Thermometer B88A9130516413 B88A912167504 Used: B88A9130516413		e: We	t Blue None Samples	on ice, cooling process has begun
Cooler Temp Read (°C): Temp should be above freezing to 6°C Correction Factor SDA Regulated Soil (N/A, water sample) oid samples originate in a quarantine zone within the United States NS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? If Yes to either question, fill out a Regulation of the control of the con	tates: AL, AR, AZ	Z, CA, FL, GA, □Yes	No including Hawali and Puerto R	oreign source (internationally, ico)?
			COMMEN	
Chain of Custody Present?	Wes DA	No DN/A	1.	
Chain of Custody Filled Out?	Dayer DA		2.	
Chain of Custody Relinquished?	Pres DN		3.	
Sampler Name and/or Signature on COC?	Tyes DN		4,	
Samples Arrived within Hold Time?	Wes DN		5.	
Short Hold Time Analysis (<72 hr)?	Øves □N		6.	3.
Rush Turn Around Time Requested?	□Yes, 🗗	7	7.	
Sufficient Volume?	Dres Dr		8.	
Correct Containers Used?	Elys D		9.	
-Pace Containers Used?	Dres On		7	
Containers Intact?	□ Yes □		10.	
Filtered Volume Received for Dissolved Tests?	□Yes, □N	7	11. Note if sediment is visible in the d	lical ad anatoin a
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	Tores On		12.	issoived container
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	ØYes ON	NO DN/A		NaOH □HCI
Headspace in VOA Vials (>6mm)?	□Yes □N	17	completed: preserv	vative:
Trip Blank Present?	Yes N	7	15.	
Trip Blank Custody Seals Present?	□Yes □N	/		
Pace Trip Blank Lot # (if purchased):		22,00		1
CLIENT NOTIFICATION/RESOLUTION Person Contacted:			Field Data Rec	quired?
Comments/Resolution:			Date/Time:	

DATA PACKAGE REPORT SAMPLE DELIVERY GROUP RCRA SDG 10305759



Project:

FMC RCRA

Pace Project No.:

10305759

Sample: 505104

Lab ID: 10305759017

Collected: 05/07/15 14:20 Received: 05/11/15 09:05 Matrix: Water

Sample: 505104	Lab ID:	103057590	17 Collecte	a: 05/07/18	14:20	Received: 05/	11/15 09:05 Ma	itnx: vvater	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical I	Method: EP	A 6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium	NDT.	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 05:15	7440-43-9	
Potassium	209	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 05:15	7440-09-7	
6020 MET ICPMS	Analytical I	Method: EP	A 6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.036	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:45	7440-38-2	
Selenium	0.0035	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:45	7782-49-2	
300.0 IC Anions	Analytical	Method: EP	A 300.0						
Chloride	115	mg/L	6.0	3.0	5		05/12/15 00:16	16887-00-6	
Fluoride	3.1	mg/L	0.25	0.018	5		05/12/15 00:16	16984-48-8	
Nitrate as N	21.5	mg/L	0.50	0.25	5		05/12/15 00:16	14797-55-8	
Sulfate	138	mg/L	6.0	3.0	5		05/12/15 00:16	14808-79-8	
350.1 Ammonia	Analytical	Method: EP	A 350.1						
Nitrogen, Ammonia	3.3 🍑	₹ mg/L	0.080	0.040	2		05/21/15 13:51	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM	4500-P E						
Orthophosphate as P	1.1	mg/L	0.050	0.017	10		05/12/15 11:31		НЗ



Project:

FMC RCRA

Pace Project No.:

Sample: 505113	Lab ID:	10305759002	Collecte	d: 05/06/15	15:35	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium Potassium	ND J-	mg/L mg/L	0.0030 2.5	0.00065 0.13	1	05/19/15 09:00 05/19/15 09:00	05/21/15 02:54 05/21/15 02:54		
6020 MET ICPMS	Analytical I	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic Selenium	0.027 0.0037	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/18/15 07:41 05/18/15 07:41	05/19/15 13:29 05/19/15 13:29		
300.0 IC Anions	Analytical I	Method: EPA 3	0.00						
Chloride Fluoride Nitrate as N Sulfate	117 0.43 8.2 87.0	mg/L mg/L mg/L mg/L	6.0 0.050 0.50 1.2	3.0 0.0036 0.25 0.60	5 1 5 1		05/11/15 23:05 05/11/15 16:42 05/11/15 23:05 05/11/15 16:42	16887-00-6 16984-48-8 14797-55-8 14808-79-8	
350.1 Ammonia	Analytical I	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:35	7664-41-7	
Phosphate, Ortho Low Level	Analytical I	Method: SM 4	500-P E						
Orthophosphate as P	0.22	mg/L	0.010	0.0035	2		05/12/15 11:21		НЗ



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

10305759

Sample: 505115	Lab ID:	10305759001	Collected	: 05/06/18	14:55	Received: 05/	11/15 09:05 M	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical I	Method: EPA 6	010 Prepara	ation Meth	od: EPA	3010			
Cadmium	ND J	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 02:47	7440-43-9	
Potassium	14.0	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 02:47	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA 6	020 Prepara	ation Meth	od: EPA	3020			
Arsenic	0.24	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:26	7440-38-2	
Selenium	0.0041	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:26	7782-49-2	
SM4500F-C Fluoride	Analytical f	Method: SM 45	500F/C						
Fluoride	0.18(j) U	mg/L	1.0	0.051	1		05/17/15 13:06	16984-48-8	В
300.0 IC Anions	Analytical N	Method: EPA 3	0.00						
Chloride	141	mg/L	12.0	6.0	10		05/11/15 22:48	16887-00-6	
Fluoride	-1.0-	mg/L	0.050	0.0036	1		05/11/15 16:12	16984-48-8	
Nitrate as N	63.6	mg/L	1.0	0.50	10		05/11/15 22:48	14797-55-8	
Sulfate	337	mg/L	12.0	6.0	10		05/11/15 22:48	14808-79-8	
350.1 Ammonia	Analytical I	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:34	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 45	500-PE						
Orthophosphate as P	2.7	mg/L	0.10	0.035	20		05/12/15 11:21		нз

REPORT OF LABORATORY ANALYSIS



Project:

FMC RCRA

Pace Project No.:

Sample: 505122	Lab ID:	10305759009	Collected	1: 05/07/15	11:05	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Phosphorus	10200	ug/L	250	12.9	1	05/14/15 15:58	05/19/15 10:24	7723-14-0	
Cadmium	- LON	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:47	7440-43-9	
Potassium	131	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:47	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.051	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:55	7440-38-2	
Selenium	0.0094	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:55	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	301	mg/L	6.0	3.0	5		05/11/15 23:58	16887-00-6	
Fluoride	0.060	mg/L	0.050	0.0036	1		05/11/15 19:14	16984-48-8	
Nitrate as N	18.6	mg/L	0.50	0.25	5		05/11/15 23:58	14797-55-8	
Sulfate	333	mg/L	6.0	3.0	5		05/11/15 23:58	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:43	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	7.4	mg/L	0.25	0.087	50		05/12/15 11:25		НЗ



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

Sample: 505123ABC	Lab ID: 1	0305759010	Collected	05/07/15	12:00	Received: 05/	11/15 09:05 M	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA 6	010 Prepara	ation Meth	od: EPA	3010			
Phosphorus	571	ug/L	250	12.9	1	05/14/15 15:58	05/19/15 10:27	7723-14-0	
Cadmium	ND-I-	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:54	7440-43-9	
Potassium	25.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:54	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA 6	020 Prepara	ation Meth	od: EPA	3020			
Arsenic	0.18	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:58	7440-38-2	
Selenium	0.16	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:58	7782-49-2	
SM4500F-C Fluoride	Analytical N	Method: SM 45	500F/C						
Fluoride	0.860	mg/L	1.0	0.051	1		05/17/15 13:12	16984-48-8	В
300.0 IC Anions	Analytical N	Method: EPA 3	0.00						
Chloride	92.0	mg/L	1.2	0.60	1		05/11/15 19:29	16887-00-6	M1
Fluoride	0.98	mg/L	0.050	0.0036	1		05/11/15 19:29	16984-48-8	M1
Nitrate as N	2.8	mg/L	0.10	0.050	1		05/11/15 19:29	14797-55-8	M1
Sulfate	467	mg/L	6.0	3.0	5		05/14/15 06:38	14808-79-8	
350.1 Ammonia	Analytical N	Method: EPA 3	50.1						
Nitrogen, Ammonia	3.7 04	mg/L	0.20	0.10	5		05/21/15 13:44	7664-41-7	M1
Phosphate, Ortho Low Level	Analytical N	Method: SM 45	500-P E						
Orthophosphate as P	0.50	mg/L	0.025	0.0087	5		05/12/15 11:26		НЗ



0.17

0.50

100

Project:

6010 MET ICP

6020 MET ICPMS

SM4500F-C Fluoride

300.0 IC Anions

Cadmium Potassium

Arsenic

Selenium

Fluoride

Chloride

Fluoride

Sulfate

Nitrate as N

350.1 Ammonia

Nitrogen, Ammonia

Orthophosphate as P

Phosphate, Ortho Low Level

FMC RCRA

Pace Project No .:

Parameters

10305759

Sample: 505155	Lab ID: 10305759013	Col

Results

Analytical Method: SM 4500-P E

mg/L

14.3

Lab ID:	10305759013	Collecte	d: 05/07/15	13:10	Received: 05/	11/15 09:05 Ma	atrix: Water	
Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical I	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
NDJ	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 04:22	7440-43-9	
427	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 04:22	7440-09-7	
Analytical I	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
0.098	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:12	7440-38-2	
0.0064	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:12	7782-49-2	
Analytical I	Method: SM 45	00F/C						
0.220	mg/L	1.0	0.051	ì		05/17/15 13:31	16984-48-8	В
Analytical I	Method: EPA 3	0.00						
167	mg/L	6.0	3.0	5		05/14/15 07:57	16887-00-6	
0.017(1)	mg/L	0.050	0.0036	1		05/11/15 20:14	16984-48-8	
6.8	mg/L	0.10	0.050	1		05/11/15 20:14	14797-55-8	
223	mg/L	6.0	3.0	5		05/14/15 07:57	14808-79-8	
Analytical I	Method: EPA 3	50.1						
0.51 J-	r mg/L	0.040	0.020	1		05/21/15 11:47	7664-41-7	

05/12/15 11:30

REPORT OF LABORATORY ANALYSIS

НЗ



Project:

FMC RCRA

Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

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1			
Sample: 505156		Lab ID:	10305759015

Collected: 05/07/15 15:05 Received: 05

1100011001 00111110 00100 1110111111111	Received:	05/11/15 09:05	Matrix:	Water
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Sample: 505156	Lab ID: 1	1030575901	15 Collecte	d: 05/07/1	5 15:05	Received: 05/	11/15 09:05 Ma	atrix: vvater	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qua
6010 MET ICP	Analytical N	Method: EPA	A 6010 Prepa	ration Meth	od: EPA	3010			
Cadmium Potassium	NDJ+ 1160	mg/L mg/L	0.0030 12.5	0.00065 0.63	1 5	05/19/15 09:00 05/19/15 09:00	05/21/15 04:41 05/21/15 08:07		
6020 MET ICPMS	Analytical N	/lethod: EP/	A 6020 Prepa	ration Meth	od: EPA	3020			
Arsenic Selenium	0.14 0.00059	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/18/15 07:41 05/18/15 07:41	05/19/15 14:18 05/19/15 14:18		
SM4500F-C Fluoride	Analytical N	Method: SM	4500F/C						
Fluoride	0.23(j) (J	mg/L	1.0	0.051	1		05/17/15 13:34	16984-48-8	В
300.0 IC Anions	Analytical N	Method: EPA	A 300.0						
Chloride Fluoride Nitrate as N Sulfate	317 -36.5 ND 226	mg/L mg/L mg/L mg/L	12.0 2.5 0.10 12.0	6.0 0.18 0.050 6.0	10 50 1 10		05/14/15 08:14 05/14/15 09:34 05/11/15 20:44 05/14/15 08:14	16984-48-8 14797-55-8	
350.1 Ammonia	Analytical N	Method: EPA	A 350.1						
Nitrogen, Ammonia	11.0 J	mg/L	0.040	0.020	1		05/21/15 11:48	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM	4500-P E						
Orthophosphate as P	139	mg/L	5.0	1.7	1000		05/12/15 11:32		НЗ



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

Lab ID:	10305759016	Collected	: 05/07/1	5 15:50	Received: 05/	11/15 09:05 M	atrix: Water	
Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Analytical N	Method: EPA 6	010 Prepara	ation Meth	od: EPA	3010			
W. C. C. C.		0.0030	0.00065	1	05/19/15 09:00			560
				1		05/21/15 04:47	7440-09-7	M1
Analytical N	Method: EPA 6	020 Prepara	ation Meth	od: EPA	3020			
0.095 0.00032(j)	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/18/15 07:41 05/18/15 07:41		7440-38-2 7782-49-2	
Analytical N	Method: SM 45	500F/C						
0.300)	mg/L	1.0	0.051	1		05/17/15 13:52	16984-48-8	В
Analytical N	Method: EPA 3	0.00						
228	mg/L	12.0	6.0	10		05/14/15 08:31	16887-00-6	
32.4	mg/L	2.5	0.18	50		05/14/15 09:56	16984-48-8	M6,R1
		13.5% 51	15,10,53	1		05/11/15 20:59	14797-55-8	M1
261	mg/L	12.0	6.0	10		05/14/15 08:31	14808-79-8	
Analytical N	Method: EPA 3	50.1						
2.5 J-	r mg/L	0.080	0.040	2		05/21/15 13:47	7664-41-7	M1
Analytical N	Method: SM 45	00-PE						
36.6	mg/L	2.5	0.87	500		05/12/15 11:34		Нз
	Analytical M O.095 O.000320 Analytical M O.300 Analytical M 228 32.4 O.0560 261 Analytical M 2.5 Analytical M	Analytical Method: EPA 6 NDC mg/L 303 mg/L Analytical Method: EPA 6 0.095 mg/L 0.000320 mg/L Analytical Method: SM 45 0.300 mg/L Analytical Method: EPA 3 228 mg/L 32.4 mg/L 0.0560 mg/L Analytical Method: EPA 3 25 mg/L Analytical Method: EPA 3	Results Units PQL	Results Units PQL MDL	Results Units PQL MDL DF	Results Units PQL MDL DF Prepared	Results Units PQL MDL DF Prepared Analyzed Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND√ mg/L 0.0030 0.00065 1 05/19/15 09:00 05/21/15 04:47 303 mg/L 2.5 0.13 1 05/19/15 09:00 05/21/15 04:47 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.095 mg/L 0.00050 0.00011 1 05/18/15 07:41 05/19/15 14:30 0.000320 mg/L 0.00050 0.00020 1 05/18/15 07:41 05/19/15 14:30 Analytical Method: SM 4500F/C 0.300 t/mg/L 1.0 0.051 1 05/17/15 13:52 Analytical Method: EPA 300.0 228 mg/L 12.0 6.0 10 05/14/15 08:31 32.4 mg/L 2.5 0.18 50 05/14/15 09:56 0.0560 mg/L 0.10 0.050 1 05/11/15 20:59 261 mg/L 12.0 6.0 10 05/14/15 08:31 Analytical Method: EPA 350.1 2.5 √+ mg/L 0.080 0.040 2 05/21/15 13:47 Analytical Method: SM 4500-P E	Results Units PQL MDL DF Prepared Analyzed CAS No. Analytical Method: EPA 6010 Preparation Method: EPA 3010 ND√ mg/L 0.0030 0.00065 1 05/19/15 09:00 05/21/15 04:47 7440-43-9 303 mg/L 2.5 0.13 1 05/19/15 09:00 05/21/15 04:47 7440-09-7 Analytical Method: EPA 6020 Preparation Method: EPA 3020 0.095 mg/L 0.00050 0.00011 1 05/18/15 07:41 05/19/15 14:30 7440-38-2 0.000320 mg/L 0.00050 0.00020 1 05/18/15 07:41 05/19/15 14:30 7782-49-2 Analytical Method: SM 4500F/C 0.300



Project:

FMC RCRA

Pace Project No.:

10305759

Sample:	5051	58

Date: 05/26/2015 03:20 PM

Lab ID: 10305759008

Collected: 05/07/15 09:55 Received: 05/11/15 09:05 Matrix: Water

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Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical M	lethod: EPA	6010 Prepa	ration Meth	od: EP/	A 3010			
Cadmium	NDJ-	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:40	7440-43-9	
Potassium	19.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:40	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.011	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:46	7440-38-2	
Selenium	0.0054	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:46	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA	300.0						
Chloride	97.2	mg/L	12.0	6.0	10		05/14/15 06:21	16887-00-6	
Fluoride	0.17	mg/L	0.050	0.0036	1		05/11/15 18:58	16984-48-8	
Nitrate as N	2.9	mg/L	0.10	0.050	1		05/11/15 18:58	14797-55-8	
Sulfate	545	mg/L	12.0	6.0	10		05/14/15 06:21	14808-79-8	
350.1 Ammonia	Analytical N	Nethod: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	d		05/21/15 11:43	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM	4500-P E						
Orthophosphate as P	0.082 U	mg/L	0.0050	0.0017	1		05/12/15 11:04		НЗ



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

Sample: 505165	Lab ID:	10305759005	Collecte	d: 05/06/15	18:35	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	ND 3	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:12	7440-43-9	
Potassium	14.5	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:12	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EP/	3020			
Arsenic	0.023	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:38	7440-38-2	
Selenium	0.0085	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:38	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	365	mg/L	6.0	3.0	5		05/14/15 05:28	16887-00-6	
Fluoride	0.20	mg/L	0.050	0.0036	1		05/11/15 17:28	16984-48-8	
Nitrate as N	5.7	mg/L	0.10	0.050	1		05/11/15 17:28	14797-55-8	
Sulfate	232	mg/L	6.0	3.0	5		05/14/15 05:28	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	0.28	mg/L	0.010	0,0035	2		05/12/15 11:23		НЗ



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

Sample: 505166	Lab ID:	10305759003	Collecte	d: 05/06/15	16:50	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical I	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND J-	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 02:59	7440-43-9	
Potassium	31.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 02:59	7440-09-7	
6020 MET ICPMS	Analytical I	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.018	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:32	7440-38-2	
Selenium	0.0060	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:32	7782-49-2	
300.0 IC Anions	Analytical I	Method: EPA 3	0.00						
Chloride	234	mg/L	12.0	6.0	10		05/11/15 23:23	16887-00-6	
Fluoride	0.64	mg/L	0.050	0.0036	1		05/11/15 16:58	16984-48-8	
Nitrate as N	38.0	mg/L	1.0	0.50	10		05/11/15 23:23	14797-55-8	
Sulfate	203	mg/L	12.0	6.0	10		05/11/15 23:23	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:36	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	0.30	mg/L	0.010	0.0035	2		05/12/15 11:22		НЗ



Project:

FMC RCRA

Pace Project No.:

10305759

		100	
Same	de:	5051	67

Lab ID: 10305759006

Collected: 05/07/15 08:00 Received: 05/11/15 09:05 Matrix: Water

Sample: 505167	Lab ID:	10305/5900	6 Collecte	d: U5/U7/18	08:00	Received: 05/	11/15 09:05 Mi	atrix: vvater	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA	6010 Prepa	ration Meth	od: EP	A 3010			
Cadmium	NDI	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:19	7440-43-9	
Potassium	12.6	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:19	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA	6020 Prepa	ration Meth	od: EP	A 3020			
Arsenic	0.046	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:40	7440-38-2	
Selenium	0.0022	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:40	7782-49-2	
300.0 IC Anions	Analytical I	Method: EPA	300.0						
Chloride	133	mg/L	6.0	3.0	5		05/14/15 05:46	16887-00-6	
Fluoride	ND	mg/L	0.050	0.0036	1		05/11/15 17:43	16984-48-8	
Nitrate as N	0.14	mg/L	0.10	0.050	1		05/11/15 17:43	14797-55-8	
Sulfate	141	mg/L	6.0	3.0	5		05/14/15 05:46	14808-79-8	
350.1 Ammonia	Analytical I	Method: EPA	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:39	7664-41-7	
Phosphate, Ortho Low Level	Analytical I	Method: SM	4500-P E						
Orthophosphate as P	4.4	mg/L	0.25	0.087	50		05/12/15 11:34		нз



Project:

FMC RCRA

Pace Project No.:

Sample: 505168	Lab ID:	10305759004	Collected	1: 05/06/15	17:50	Received: 05/	/11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical N	Method: EPA 6	010 Prepar	ration Meth	od: EPA	3010			
Cadmium	ND J-	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:05	7440-43-9	
Potassium	16.6	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:05	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA 6	020 Prepar	ration Meth	od: EPA	3020			
Arsenic	0.022	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:35	7440-38-2	
Selenium	0.076	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:35	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA 3	0.00						
Chloride	53.7	mg/L	1.2	0.60	1		05/11/15 17:13	16887-00-6	
Fluoride	3.5	mg/L	0.50	0.036	10		05/11/15 23:40	16984-48-8	
Nitrate as N	20.6	mg/L	1.0	0.50	10		05/11/15 23:40	14797-55-8	
Sulfate	1350	mg/L	24.0	12.0	20		05/14/15 05:10	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	0.41 J	f mg/L	0.040	0.020	1		05/21/15 11:37	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	0.095	mg/L	0.0050	0.0017	1		05/12/15 11:01		НЗ



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

Sample: 505183	Lab ID:	10305759007	Collected: 05/07/15 09:10		Received: 05/	11/15 09:05 Ma	atrix: Water		
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	NDI	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:25	7440-43-9	
Potassium	12.7	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:25	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.014	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:43	7440-38-2	
Selenium	0.0060	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:43	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	104	mg/L	6.0	3.0	5		05/14/15 06:03	16887-00-6	
Fluoride	0.34	mg/L	0.050	0.0036	1		05/11/15 17:58	16984-48-8	
Nitrate as N	1.9	mg/L	0.10	0.050	1		05/11/15 17:58	14797-55-8	
Sulfate	211	mg/L	6.0	3.0	5		05/14/15 06:03	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:41	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	0.053) mg/L	0.0050	0.0017	1		05/12/15 11:03		НЗ



Project:

FMC RCRA

Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505601	Lab ID: 1	10305759020	Collected	: 05/07/1	5 15:30	Received: 05/	/11/15 09:05 M	atrix: Water			
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical N	Method: EPA 6	010 Prepar	ation Meth	od: EPA	3010					
Cadmium Potassium	ND J-	mg/L mg/L	0.0030 12.5	0.00065 0.63	1 5	05/19/15 09:00 05/19/15 09:00	05/21/15 05:21 05/21/15 08:12	7440-43-9 7440-09-7			
6020 MET ICPMS	Analytical N	Method: EPA 6	020 Prepar	ation Meth	od: EPA	3020					
Arsenic Selenium	0.14 0.00072	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/18/15 07:41 05/18/15 07:41	05/19/15 14:48 05/19/15 14:48				
SM4500F-C Fluoride	Analytical N	Method: SM 45	500F/C								
Fluoride	U (181.0	mg/L	1.0	0.051	1		05/17/15 14:04	16984-48-8	В		
300.0 IC Anions	Analytical N	Analytical Method: EPA 300.0									
Chloride Fluoride Nitrate as N Sulfate	313 -37:2- ND 222	mg/L mg/L mg/L mg/L	12.0 2.5 0.10 12.0	6.0 0.18 0.050 6.0	10 50 1 10		05/14/15 09:19 05/14/15 13:00 05/11/15 22:15 05/14/15 09:19	16984-48-8 14797-55-8			
350.1 Ammonia	Analytical N	Method: EPA 3	50.1								
Nitrogen, Ammonia	10.9 7	mg/L	0.80	0.40	20		05/21/15 13:53	7664-41-7			
Phosphate, Ortho Low Level	Analytical N	Method: SM 45	500-P E								
Orthophosphate as P	122	mg/L	5.0	1.7	1000		05/12/15 11:33		НЗ		



Project:

FMC RCRA

Pace Project No.:

Date: 05/26/2015 03:20 PM

Sample: 505701	Lab ID:	10305759014	Collecte	d: 05/07/15	14:00	Received: 05/	11/15 09:05 Ma	atrix: Water		
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Methe	od: EPA	3010				
Cadmium Potassium	ND S ND	mg/L mg/L	0.0030	0.00065 0.13	1	05/19/15 09:00 05/19/15 09:00	05/21/15 04:37 05/21/15 04:37	7440-43-9 7440-09-7		
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020				
Arsenic Selenium	0.00029Ú) ND	mg/L mg/L	0.00050 0.00050	0.00011 0.00020	1	05/18/15 07:41 05/18/15 07:41	05/19/15 14:15 05/19/15 14:15			
300.0 IC Anions	Analytical	Method: EPA 3	0.00							
Chloride Fluoride Nitrate as N Sulfate	ND ND ND ND	mg/L mg/L mg/L mg/L	1,2 0,050 0,10 1,2	0.60 0.0036 0.050 0.60	1 1 1 1		05/11/15 20:29 05/11/15 20:29 05/11/15 20:29 05/11/15 20:29	16887-00-6 16984-48-8 14797-55-8 14808-79-8		
350.1 Ammonia	Analytical	Method: EPA 3	50.1							
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:48	7664-41-7		
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E									
Orthophosphate as P	0.017	mg/L	0.0050	0.0017	1		05/12/15 11:11		НЗ	



TECHNICAL REVIEW ACTION SUMMARY SDG 10305759

Arsenic J1

Cadmium J-1

Potassium

Selenium J1

If the field is left blank no actions or qualifications were necessary.

J1 Result is flagged as estimated (J) due to uncertainty at the low levels.

J-1 Result reported <2PQL is flagged as estimated with the potential for

low bias (J-) due to non-compliant CRI recovery.





SAMPLE SUMMARY

Project:

FMC RCRA

Pace Project No.:

10305759

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
10305759001	505115	Water	05/06/15 14:55	05/11/15 09:05	
10305759002	505113	Water	05/06/15 15:35	05/11/15 09:05	
10305759003	505166	Water	05/06/15 16:50	05/11/15 09:05	
10305759004	505168	Water	05/06/15 17:50	05/11/15 09:05	
10305759005	505165	Water	05/06/15 18:35	05/11/15 09:05	
10305759006	505167	Water	05/07/15 08:00	05/11/15 09:05	
10305759007	505183	Water	05/07/15 09:10	05/11/15 09:05	
10305759008	505158	Water	05/07/15 09:55	05/11/15 09:05	
10305759009	505122	Water	05/07/15 11:05	05/11/15 09:05	
10305759010	505123ABC	Water	05/07/15 12:00	05/11/15 09:05	
10305759013	505155	Water	05/07/15 13:10	05/11/15 09:05	
10305759014	505701	Water	05/07/15 14:00	05/11/15 09:05	
10305759015	505156	Water	05/07/15 15:05	05/11/15 09:05	
10305759016	505157ABC	Water	05/07/15 15:50	05/11/15 09:05	
10305759017	505104	Water	05/07/15 14:20	05/11/15 09:05	
10305759020	505601	Water	05/07/15 15:30	05/11/15 09:05	

LABORATORY CASE NARRATIVE





Project: FMC RCRA Pace Project No.: 10305759

Method: EPA 6010 Description: 6010 MET ICP

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MPRP/54323

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305759010,10305759016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- · MSD (Lab ID: 1963716)
 - · Potassium





Project: FMC RCRA Pace Project No.: 10305759

Method: EPA 6020

Description: 6020 MET ICPMS

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project:

FMC RCRA

Pace Project No.:

10305759

Method:

SM 4500F/C

Description: SM4500F-C Fluoride

Client:

FMC

Date:

May 26, 2015

General Information:

6 samples were analyzed for SM 4500F/C. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: WET/41829

B: Analyte was detected in the associated method blank.

- · BLANK for HBN 355002 [WET/4182 (Lab ID: 1968130)
 - · Fluoride

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: FMC RCRA Pace Project No.: 10305759

Method: EPA 300.0 Description: 300.0 IC Anions

Client: FMC Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22789

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305759010,10305759016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- · MS (Lab ID: 1961704)
 - · Chloride
 - Fluoride
 - Nitrate as N
- MSD (Lab ID: 1961705)
 - · Chloride
 - Fluoride
 - · Nitrate as N
- · MSD (Lab ID: 1961707)
 - · Nitrate as N

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1961706)
 - · Fluoride
- MSD (Lab ID: 1961707)
 - Fluoride

R1: RPD value was outside control limits.

- · MSD (Lab ID: 1961707)
 - Fluoride

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 300.0 Description: 300.0 IC Anions

Client: FMC

Date: May 26, 2015

Analyte Comments:

QC Batch: WETA/22789

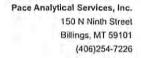
E: Analyte concentration exceeded the calibration range. The reported result is estimated.

· MS (Lab ID: 1961704)

· Sulfate

- MSD (Lab ID: 1961705)

· Sulfate





Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 350.1 Description: 350.1 Ammonia

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

OC Batch: WETA/22962

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305759010,10305759016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- · MS (Lab ID: 1971729)
 - · Nitrogen, Ammonia
- · MSD (Lab ID: 1971728)
 - · Nitrogen, Ammonia
- MSD (Lab ID: 1971730)
 - · Nitrogen, Ammonia





Project: Pace Project No.: FMC RCRA 10305759

Method:

SM 4500-P E

Description: Phosphate, Ortho Low Level

Client:

FMC

Date:

May 26, 2015

General Information:

16 samples were analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.

- · 505104 (Lab ID: 10305759017)
- · 505113 (Lab ID: 10305759002)
- · 505115 (Lab ID: 10305759001)
- · 505122 (Lab ID: 10305759009)
- +505123ABC (Lab ID: 10305759010)
- . 505155 (Lab ID: 10305759013)
- · 505156 (Lab ID: 10305759015)
- · 505157ABC (Lab ID: 10305759016)
- 505158 (Lab ID: 10305759008)
- 505165 (Lab ID: 10305759005)
- 505166 (Lab ID: 10305759003)
- · 505167 (Lab ID: 10305759006)
- 505168 (Lab ID: 10305759004)
- 505183 (Lab ID: 10305759007)
- 505601 (Lab ID: 10305759020)
- 505701 (Lab ID: 10305759014)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

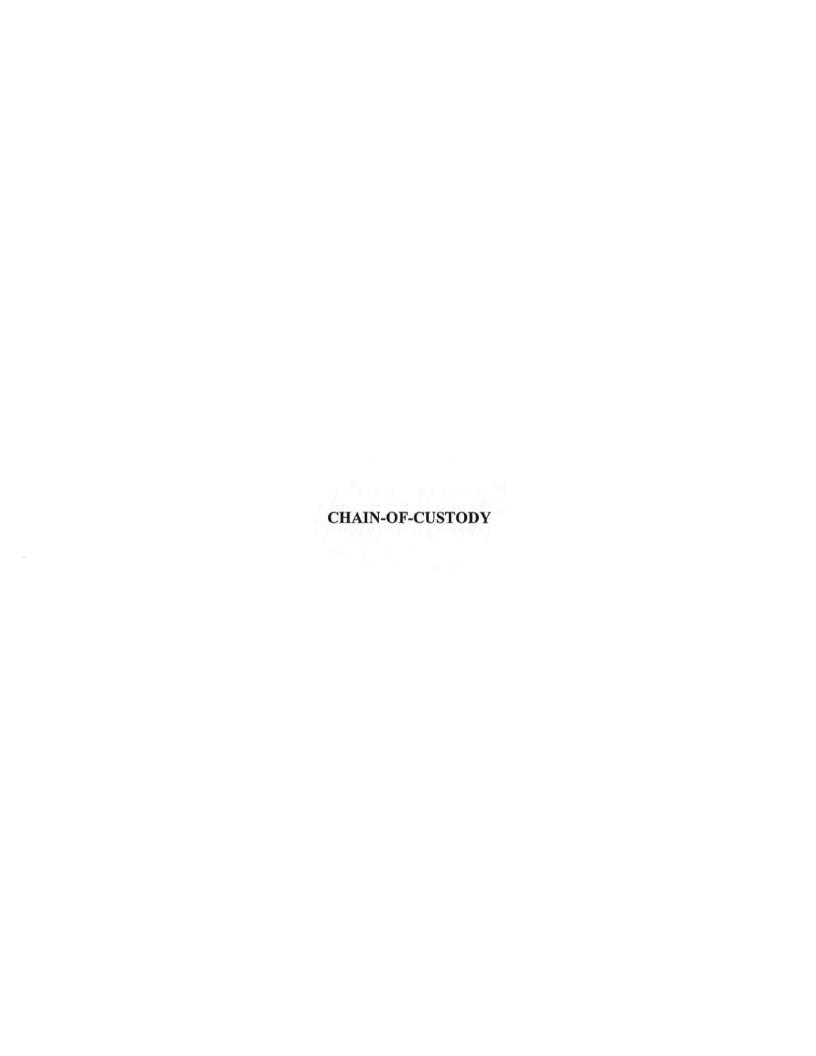
Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS



Face Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

1890 5769 The Chain-of-Custody is a LEGAL DOCUMENT, All relevant fields must be completed accurately.

是是 多 AND I Pace Project No./ Lab f.D. 7 PHS 849 11 PM 97 17 (MA) DRINKING WATER Fed Ex Air Bill # SAMPLE CONDITIONS F-ALL-Q-020rev.08, 12-Oct-2007 OTHER Cooler (Y/N) 1 Custody Sealer 7 2/Raky 50 C ICE (YIN) 1 Received on GROUND WATER Residual Chlorine (Y/N) 50 Lemp in .C とおからが Page: REGULATORY AGENCY Ö RCRA TIME Requested Analysis, Filtered (Y/N) 10 1 STATE Site Location NPDES DATE Ortho Phosphorus るとかメスかる UST Ammonia 10 8 SUROHASOH9 JATO FLUORIDE (ISE) PO BOX 4111 POCATELLO ID 83202 DATE Signed (MM/DD/YY): TOTAL METALS 6010 ACCEPTED BY / AFFILIATION TOTAL METALS 6020 300'01C ** CONE JiseT sisylsnA 1 INA Olher Methanol Invoice Information: Attention: Brian McGinnis Kabor Xiong Na₂S₂O₃ Preservatives HOBN FMC HCI 2 A 23 HNO3 Company Name: PSSQ4 Malter Craws / Hydro metris 5/7 /15/16 210 Section C Unpreserved Address: MI # OF CONTAINERS monm mon SAMPLER NAME AND SIGNATURE SAMPLE TEMP AT COLLECTION PRINT Name of SAMPLER: SIGNATURE of SAMPLER: CO80 XIII 1200 DATE 1835 1750 0910 2955 SIG IS IS 35 WIST 1650 8 COMPOSITE ENDIGRAB COLLECTED SKI oject Number ACRA-PERCLA-CALCINER Report To: Ericka Vallance, Hydrometrics RELINQUISHED BY FAFFILIATION TIME COMPOSITE Copy To: Rob Hartman, MWH 9 Bruce Wallin, ECCI DATE Required Project Information: のである FMC 0 O O O O O O O O SAMPLE TYPE (G=GRAB C=COMP) urchase Order No.: W W WT M ¥ WIT 150 W M M W MATRIX CODE (see valid codes to left) Project Name: Section B Valid Matrix Codes 2 122 & DREWING WATER ON WATER WASTE WATER PRODUCT SOUCOUR Total Phos sub to Pace-VM by 6010 only on wells 108, 121. AR OTHER 505 66 505 183 505 123 221 909 505 167 505 | 508 505 68 505 165 205 5010. Cadmium. Potassium: 6020. Arsenic, Selenium 505 N brian.mcginnis@fmc.com ADDITIONAL COMMENTS 505 POCATELLO, ID 83202 SD6-505 Semple JDS MUST BE UNIQUE Fax SAMPLE ID 56420 PO BOX 4111 equired Creek Information Required Cient information. equested Due Date/TAT 300.0- Cl. SO4, Nitrale, F T NC FMC Section D Еттай То: Page 40 of 44 'n co 9 -22 10 60 # WELL ۴

Important Note. By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to fale charges of 1.5% per month for any invoices not paid within 30 days

CI 1711 V-CI - COCO 1 CO 1 / MINISTY LICAL INCIDENT PROCESSION OF THE Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1820169

Pace Analytical

216 077 323 310 Sile. Pace Project No.i Lab i.D. Samples Intect DRINKING WATER Fed Ex Air Bill # 80581698850 SAMPLE CONDITIONS OTHER Codict (Y/N) Cristody Sealer Received on Ide (Y/N) GROUND WATER Residual Chlorine (Y/N) 0 J. ui dwa L 子屋もか Page: REGULATORY AGENCY RCRA 0 TIME Requested Analysis Filtered (Y/N) 0 12 Site Location STATE 10/50 NPDES DATE Оцьо Рьоврюгия UST P sinomm 100 SUROHASOHA JATOT N 2 XAAA X FLUORIDE (ISE) DATE Signed (MIM/DD/YY): PO BOX 4111 POCATELLO ID 83202 ACCEPTED BY / AFFILIATION TOTAL METALS 6010 TOTAL METALS 6020 300'01C ** Sane JiseT sizylenA J NA Other Methanol Brian McGinnis Kabor Xiong Preservatives Na₂S₂O₃ HOBN 11-6 HCI HNO3 N 16 345p отралу Мате: Jal 50m "OS"H Reference: Pace Project Manuger: Pace Profile #: Section C 7 N m N Ni Unpreserved TIME ace Quot Address. 10 30 viv. mann T # OF CONTAINERS SAMPLER NAME AND SIGNATURE 5/1/15 SAMPLE TEMP AT COLLECTION PRINT Name of SAMPLER: DATE neo 0251 0551 7051 530 1200 310 500 055 255 TIME ENDIGRAB 5715 Nalter Gove / Hydrametrics DATE COLLECTED RCRA CERCLA-CALCINER Report To: Ericka Vallance, Hydrometrics RELINQUISHED BY / AFFILIATION TIME START Copy To: Rob Hartman, MWH Bruce Wallin, ECCI DATE Required Project information: FMC 0 (5 0 0 O O O O O O O O (с=скув с=сомь) SAMPLE TYPE urchase Order No.: W W W W W WIT W M WT M ķ roject Number WT (flet of sebas bilev sea) MATRIX CODE roject Name: Section B
 Walled Matrix Codes

 MATRIX
 CODE

 DRINGONEWARRS DW
 WT

 WATER
 WM

 MASTE WATER
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 </ 1228 505 (STB 121 505 123C 505 156 00 505 155 505 157 FO | SOS 505 157 Total Phos sub to Pace-VM by 6010 only on wells 108, 505 70 5010 Cadmium, Potassium, 6020. Arsenic, Selenium brian.mcginnis@fmc.com ADDITIONAL COMMENTS 505 505 POCATELLO, ID 83202 505 (A-Z, 0-9.1,-) Sample IDs MUST BE UNIQUE SAMPLE ID Fax Section D Required Clent Information PO BOX 4111 Section A Required Clent Information: squested Due Date/TAT: FMC 300.0-Cl, SO4, neil To: 22 13 10 ILEM # N 79 107 0 123

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Thorant Note: By

F-ALL-Q-020rev.08, 12-Oct-2007

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10 TA

SIGNATURE of SAMPLER:

signing this form you are accepting Pace's NET 30 day payment terms and agreeing in tale charges of 1.5% per month for any invoices not paid

Pace Analytical

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.13 Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority: Pace Minnesota Quality Office

Sample Condition Client Name: Project #: MO#:10305759 Upon Receipt Courier: Fed Ex UPS USPS Client Commercial Pace Other: Tracking Number: Optional: Proj. Due Date: Proj. Name: Custody Seal on Cooler/Box Present? Seals Intact? Yes No Packing Material: Bubble Wrap Yes No Bubble Bags None Temp Blank? Thermometer B88A9130516413 ₽7888A912167504 None Samples on ice, cooling process has begun Type of Ice: Wet Blue Used: E88A0143310098 Cooler Temp Read (°C): 4555 Temp should be above freezing to 6°C Cooler Temp Corrected ("C): & Biological Tissue Frozen? Yes, Date and Initials of Person Examining Contents: Correction Factor: USDA Regulated Soil (N/A, water sample) Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. Did samples originate from a foreign source (internationally, MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? Yes Yes No including Hawaii and Puerto Rico)? No If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork. COMMENTS: Chain of Custody Present? Pes □No □N/A 1. Chain of Custody Filled Out? Elves 2. □No □N/A Chain of Custody Relinquished? Yes No □N/A 3. Sampler Name and/or Signature on COC? □No □N/A 4. Samples Arrived within Hold Time? 5. □N/A Short Hold Time Analysis (<72 hr)? Yes □N/A □No Rush Turn Around Time Requested? Yes P-NO.≥ □N/A 7. Sufficient Volume? Yes □No □N/A 8. Correct Containers Used? Yes □No □N/A 9. -Pace Containers Used? Yes □No □N/A Containers Intact? □No □N/A 10. Yes. Filtered Volume Received for Dissolved Tests? Yes □No EN/A Note if sediment is visible in the dissolved container 11. Sample Labels Match COC? □No. - ∀es □N/A 12. -Includes Date/Time/ID/Analysis Matrix: All containers needing acid/base preservation have been THNO, 3-201/ 6-201/ HCI NaOH checked? □No □N/A All containers needing preservation are found to be in compliance with EPA recommendation? (HNO₃, H₂SO₄, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) No □N/A Yes Exceptions: VOA, Coliform, TOC, Oil and Grease, Initial when DRO/8015 (water) DOC EN/A completed: Tyes Headspace in VOA Vials (>6mm)? N/A □Yes 14. Trip Blank Present? FIN/A 15. □Yes No Trip Blank Custody Seals Present? ☐Yes □No DAYA Pace Trip Blank Lot # (if purchased): CLIENT NOTIFICATION/RESOLUTION Field Data Required? Tyes No Person Contacted: Date/Time: Comments/Resolution:

Project Manager Review: Date: White 12, 2015.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

PM HRZ PM HRZ Due Date 05/28/15 of CLIENT PROCE MPLS

wormay and чини рассівох сот

Workorder: 10305759 Workorder Name: FMC RCRA Owner Received Date: 5/11/2015 Results Requested By: 5/26/2015

C00	w	2	1	Transfers	からない	Ch	4	ω	2	1	Kabo Pace 1700 Minn Phon Fax (
Cooler Temperature on Receipt	-0	AN (M)	* Audi Xiri	sfers Released By					505123ABC	505122	Kabor Xiong Pace Analytical Services, Inc. 1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Fax (612)607-6444 trent
19		7			が対象				ROS	PS	When the
cus Cus		5/12/15	SHIR	Date/Time	おかけることでは、	Y.			5/7/2015 12:00	5/7/2015 11:05	Pace 315 C Virgin Phon
Custody Seal /Y		2120212	Jen J	Received By	· · · · · · · · · · · · · · · · · · ·				10305759010	10305759009	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042
Y/or N		1	1		はながれた				Water	Water	a MN
			M						છ	3	1403
Received on Ice / 6	1.00	100 10 10 10 10 10 10 10 10 10 10 10 10	1 51/2/15/15	Date/Time 1.4	· · · · · · · · · · · · · · · · · · ·				- X	X	T. phas by 6010
OF N				· bacter o	を できる						***
Samples intact (V or			9	A tenter pty weeded due 6/1/15	The Control of the Co						
W or N)			51/110	に変ないががある				010	200	LAB USE ONLY

^{***}In order to maintain client confidentiality, location/hame of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical*

Document Name: Sample Condition Upon Receipt Form Document No.; F-VM-C-001-Rev.09

Document Revised: 23Feb2015

Page 1 of 1
Issuing Authority:
Pace Virginia, Minnesota Quality Office

Courler: Fed Ex UPS Commercial Pace Fracking Number:	□USPS □Other		Client	1246918
ustody Seal on Cooler/Box Present? Yes	□No	Seals	Intact?	Yes No Optional: Proj. Due Date: Proj. Name:
acking Material: Bubble Wrap Bubble	Bags N	one I	Other:	Temp Blank? ☑Yes ☐No
ermometer Used: 🔽 140792808	Type of			
Cooler Temp Read *C: 1,9 Cooler Tem	p Corrected . Factor: <u>4-0, 5</u>	c: 2.	2	Blue None Samples on ice, cooling process has beg Biological Tissue Frozen? Yes No I Initials of Person Examining Contents: Comments: 5/(3),5775
Chain of Custody Present?	₩es	□No	□N/A	1.
Chain of Custody Filled Out?	Des	□No	□N/A	2.
Chain of Custody Relinquished?	₹Q.Wes	□No	□N/A	3.
ampler Name and Signature on COC7	Gyes	□No	DAYA	4.
amples Arrived within Hold Time?	Wes	□No	□N/A	5.
hort Hold Time Analysis (<72 hr)?	□Yes	MNo	□N/A	6.
ush Turn Around Time Requested?	□Yes	SONO	□N/A	7.
ufficient Volume?	VZYgs	□No	□N/A	8.
orrect Containers Used?	(S)Yes	□No	□N/A	9.
-Pace Containers Used?	Nes .	□No	□N/A	
ontainers Intact?	Dyes	□No	□N/A	10.
iltered Volume Received for Dissolved Tests?	□Yes	□No	₩ N/A	11. Note if sediment is visible in the dissolved containers.
ample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	51 Qyes	□No	□N/A	12.
all containers needing acid/base preservation will be hecked and documented in the pH logbook,	Prop	□No	□n/A	See pH log for results and additional preservatio documentation
eadspace in Methyl Mercury Container	□Yes	□No	DATA	13.
eadspace in VOA Vials (>6mm)?	□Yes	□No	DAN/A	14.
rip Blank Present?	□Yes	No	ANA D	15.
rip Blank Custody Seals Present? ace Trip Blank Lot # (if purchased):	□Yes	□No	ZNYA	
Person Contacted:				Field Data Required? Yes No
Comments/Resolution;				
CAL WAIVER ON FILE Y N		TENA	DEDATIN	RE WAIVER ON FILE Y N

DATA PACKAGE REPORT
SAMPLE DELIVERY GROUP
RCRA SDG
10312267



Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

6010C MET ICP Analytical Method: EPA 6010C Preparation Method: EPA 3010 Phosphorus 0.50 mg/L 0.10 0.013 1 07/08/15 09:59 07/0	Analyzed CAS No.	Qual
Phosphorus 0.50 mg/L 0.10 0.013 1 07/08/15 09:59 07/0		
21.5		
Codesium No. 2011	9/15 08:58 7723-14-0	
Cadmium ND mg/L 0.0030 0.00065 1 06/30/15 12:26 06/3	80/15 18:45 7440-43-9	
Potassium 123 mg/L 12.5 0.63 5 06/30/15 12:26 07/0	1/15 10:11 7440-09-7	
6020 MET ICPMS Analytical Method: EPA 6020 Preparation Method: EPA 3020		
Arsenic 0.018 mg/L 0.00050 0.00011 1 07/06/15 05:36 07/0	7/15 08:58 7440-38-2	
Selenium 0.015 mg/L 0.00050 0.00020 1 07/06/15 05:36 07/0	7/15 08:58 7782-49-2	
300.0 IC Anions Analytical Method: EPA 300.0		
Chloride 424 mg/L 12.0 6.0 10 06/2	8/15 02:12 16887-00-6	6 M6
Fluoride 0.52 mg/L 0.050 0.0036 1 06/2	7/15 15:28 16984-48-8	
Nitrate as N 17.8 mg/L 1.0 0.50 10 06/2	8/15 02:12 14797-55-8	E
Sulfate 350 mg/L 12.0 6.0 10 06/2	8/15 02:12 14808-79-8	D 0.070
350.1 Ammonia Analytical Method: EPA 350.1		
Nitrogen, Ammonia 0.020 mg/L 0.040 0.020 1 07/0	7/15 11:34 7664-41-7	
Phosphate, Ortho Low Level Analytical Method: SM 4500-P E		
Orthophosphate as P 0.44 mg/L 0.025 0.0087 5 06/2	7/15 15:13	



Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Sample: 505121A	Lab ID:	10312267001	Collected	1: 06/26/15	09:05	Received: 06/	27/15 09:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical N	Method: EPA 6	010C Prepa	aration Met	hod: EF	PA 3010			
Phosphorus	0.72	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 09:17	7723-14-0	
Cadmium	ND-(-	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 18:38	7440-43-9	
Potassium	56.2	mg/L	12.5	0.63	5	06/30/15 12:26	07/01/15 10:05	7440-09-7	
6020 MET ICPMS	Analytical N	Method: EPA 6	020 Prepar	ation Metho	od: EPA	3020			
Arsenic	0.0089	mg/L	0.00050	0.00011	1	07/02/15 14:33	07/07/15 12:29	7440-38-2	
Selenium	0.014	mg/L	0.00050	0.00020	1	07/02/15 14:33	07/07/15 12:29	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA 3	0.00						
Chloride	482	mg/L	12.0	6.0	10		06/28/15 01:37	16887-00-6	
Fluoride	0.18	mg/L	0.050	0.0036	1		06/27/15 14:57	16984-48-8	
Nitrate as N	19.2	mg/L	1.0	0.50	10		06/28/15 01:37	14797-55-8	
Sulfate	383	mg/L	12.0	6.0	10		06/28/15 01:37	14808-79-8	
350.1 Ammonia	Analytical N	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.049	mg/L	0.040	0.020	1		07/07/15 11:33	7664-41-7	
Phosphate, Ortho Low Level	Analytical N	Method: SM 45	500-P E						
Orthophosphate as P	0.70	mg/L	0.025	0.0087	5		06/27/15 15:10		



Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Sample: 505604	Lab ID:	10312267002	Collecte	d: 06/26/15	09:30	Received: 06/	27/15 09:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical I	Method: EPA 6	010C Prep	paration Met	hod: Ef	PA 3010			
Phosphorus	0.71	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 08:55	7723-14-0	
Cadmium	ND.	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 18:41	7440-43-9	
Potassium	55.8	mg/L	12.5	0.63	5	06/30/15 12:26	07/01/15 10:08	7440-09-7	
6020 MET ICPMS	Analytical I	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	0.0092	mg/L	0.00050	0.00011	1	07/02/15 14:33	07/07/15 12:32	7440-38-2	
Selenium	0.015	mg/L	0.00050	0.00020	1	07/02/15 14:33	07/07/15 12:32	7782-49-2	
300.0 IC Anions	Analytical N	Method: EPA 3	0.00						
Chloride	480	mg/L	12.0	6.0	10		06/28/15 01:55	16887-00-6	
Fluoride	0.20	mg/L	0.050	0.0036	1		06/27/15 15:12	16984-48-8	
Nitrate as N	19.3	mg/L	1.0	0.50	10		06/28/15 01:55	14797-55-8	
Sulfate	381	mg/L	12.0	6.0	10		06/28/15 01:55	14808-79-8	
350.1 Ammonia	Analytical I	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		07/07/15 11:34	7664-41-7	
Phosphate, Ortho Low Level	Analytical I	Method: SM 45	500-P E						
Orthophosphate as P	0.64	mg/L	0.025	0.0087	5		06/27/15 15:11		



Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Sample: 5051704	Lab ID:	10312267006	Collecte	d: 06/26/15	10:30	Received: 06/	27/15 09:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical	Method: EPA 6	010C Prep	paration Met	hod: El	PA 3010			
Phosphorus	ND _	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 09:14	7723-14-0	
Cadmium	NDJ	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 19:00	7440-43-9	
Potassium	ND.J	mg/L	2.5	0.13	1	06/30/15 12:26	06/30/15 19:00	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	A 3020			
Arsenic	ND	mg/L	0.00050	0.00011	1	07/06/15 05:36	07/07/15 09:17	7440-38-2	
Selenium	ND	mg/L	0.00050	0.00020	1	07/06/15 05:36	07/07/15 09:17	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	ND	mg/L	1.2	0.60	1		06/27/15 16:43	16887-00-6	
Fluoride	0.0070(J)	mg/L	0.050	0.0036	1		06/27/15 16:43	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		06/27/15 16:43	14797-55-8	
Sulfate	ND	mg/L	1.2	0.60	1		06/27/15 16:43	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		07/07/15 11:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	ND	mg/L	0.0050	0.0017	1		06/27/15 15:02		



TECHNICAL REVIEW ACTION SUMMARY SDG 10312267

Arsenic

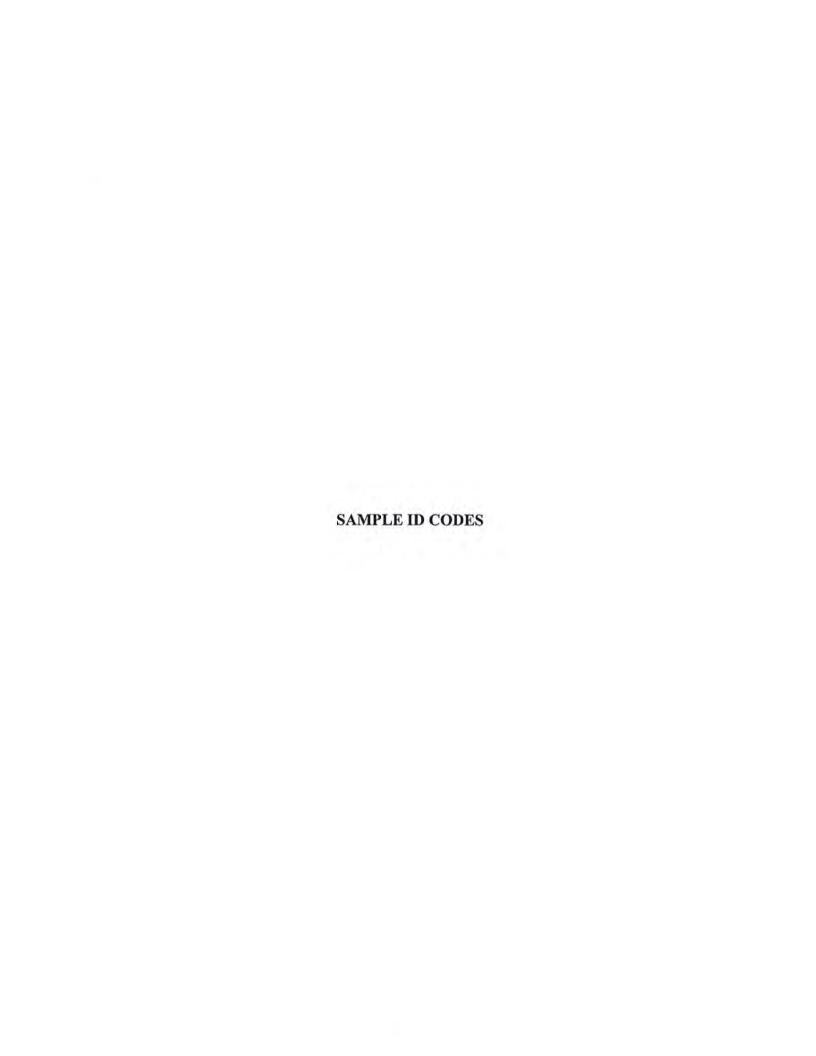
Cadmium J-1

Potassium J-1

Selenium

If the field is left blank no actions or qualifications were necessary.

J-1 - Result reported <2PQL is flagged as estimated with the potential for low bias (J-) due to non-compliant CRI recovery.







SAMPLE SUMMARY

Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10312267001	505121A	Water	06/26/15 09:05	06/27/15 09:15
10312267002	505604	Water	06/26/15 09:30	06/27/15 09:15
10312267003	505108A(ABC)	Water	06/26/15 10:05	06/27/15 09:15
10312267006	5051704	Water	06/26/15 10:30	06/27/15 09:15

LABORATORY CASE NARRATIVE





Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.:

10312267

Method: EPA 6010 Description: 6010 MET ICP

Client: FMC

nent. Fiv

Date:

July 14, 2015

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.:

10312267

Method:

EPA 6010C Description: 6010C MET ICP

Client:

FMC

Date:

July 14, 2015

General Information:

4 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No .:

10312267

Method:

EPA 6020

Description: 6020 MET ICPMS

Client:

FMC

Date:

July 14, 2015

General Information:

4 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: EPA 300.0 Description: 300.0 IC Anions

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/23586

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10312024001,10312267003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- · MS (Lab ID: 2008732)
 - · Fluoride
- · MSD (Lab ID: 2008733)
 - · Fluoride

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- · MS (Lab ID: 2008732)
 - Chloride
 - · Nitrate as N
 - · Sulfate
- · MSD (Lab ID: 2008733)
 - Chloride
 - · Nitrate as N
 - Sulfate





Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.:

10312267

Method:

EPA 350.1 Description: 350.1 Ammonia

Client:

FMC

Date:

July 14, 2015

General Information:

4 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project:

RCRA-CERLCA-CALCINER-REV

Pace Project No.:

10312267

Method: S

SM 4500-P E

Description: Phosphate, Ortho Low Level

Client:

FMC

Date:

July 14, 2015

General Information:

4 samples were analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

CHAIN-OF-CUSTODY

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT, At relevant fields must be completed accurately.

Pace Analytical

Ø6/29/2015

08:04

4064434155

(A/A) Pace Project No.J Lab I.D. B715 2040 9665 DRINKING WATER SAMPLE CONDITIONS Coolar (VIII) **SPEEK** Que 10 Received on Sample Sample Roman Sample Roma GROUND WATER Residual Chlorina (Y/V) J. ul dula, Pago: REGULATORY AGENCY 0 RCRA 温品 Requested Analysis Filtered (YIN) 51/72/90 De DATE Site Location STATE NPDES Otho Phoephorus TEN T BinommAD **SUROHYZOHY JATOT** DATE Signed (WINDDAY): -LUORIDE (ISE) PO BOX 4111 POCATELLO ID 83202 ACCEPTED BY I AFRILATION TOTAL METALS 6010 OTAL METALS 6020 300.00C ** CONE Blast slayisnAJ THI Olher lonariteM Brian McGinnis COESERN Preservatives Kabor Xiong HOBN PRINT NAMES OF SAUPLER: NQ (+CM) Company Name: FIMC HCI かかかる чио2 OSZH Pate Carto Robernos: Paze Prájed Hanger: TIME Section C Unpreserved Address: # OF CONTAINERS SAMPLER NAME AND SIGNATURE SAMPLE TEMP AT COLLECTION 1/2/18 DATE 500 0830 1005 1030 るがなるから TIME ENDORRES BROKENS Wolfe Line / Hydromorphics DATE COLLECTED rejed Number RCRA-CERCLA-CALCINER RELINDUISHED BY I AFFELATION Report To: Ericka Vallance, Hydrometrics TIME START Josy To: Rob Hartman, MWH Bruce Wallin, ECC DATE Required Project Information FMC 0 9 0 5 O O 0 ø O SYMBRE JABE 0 (G=GRAB C=COMP) Lachase Order No.: W 14 W 5 W W W 17 W W W W MATRIX CODE (see valid access wild) hajed Name: Section B
 Valid Hanks Coclus
 ANTHIN
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 ANTHIN
 9206
 2006

 ANTHIN
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 WARTER
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 408 122 B 505 | 08 A B 505 10 BAC Total Phos sub to Pece-VM by 6010 only on wells 108, 121. 505 1084 505 704 499505 505 | 21 A OLD. Carankum, Potassium, 6020; Araenic, Selanium ADDITIONAL COMMENTS 505 505 505 505 505 brian moginnis@fmc.com 505 (A.Z. D.B.1...) Sarçàs tos MUST BE LANQUE POCATELLO, ID 83202 SAMPLEID Section D Required Carol Information PO BOX 4111 Seption A Rapulted Clerk Information: Requirated Due Dates AT: 300.0- CI, SOJ, NFrste, Errail Fo: 9 \$ eр # WELL

HYDROMETRICS

PAGE.

01/01

F.ALL-0-020rev.08, 12-0ct-2007

lingacher i Noter. By Cyding this form you are accepting Pace's NCT to deppend and equeling of acceptance of the second in any include nay paid within 30 days.

Page 24 of 27

SIGNATURE of SAMPLER: 10 Q 6

Pace Analytical

Document Name: Sample Condition Upon Receipt Form Document No.: F-MN-L-213-rev.13

Document Revised: 23Feb2015 Page 1 of 1 Issuing Authority: Pace Minnesota Quality Office

Sample Condition Client Name:	Proje	"" WO#:10312267
Courier: Clark Clurk	i v	NI SE DE LINE DISTRICTOR CONTROL
LIOFS LIOFS	USPS Client	
Commercial Pace SpeeDee Cracking Number: 30040	10ther:	10312267
Custody Seal on Cooler/Box Present? Yes No	Seals Intact?	Yes No Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubble Bags	□None □Other:	Temp Blank? Yes No
Thermometer B88A9130516413 B88A91216750 Used: B88A9130516413		Vet □Blue □None □Samples on ice, cooling process has begun
Cooler Temp Read (*C): Cooler Temp Cor Temp should be above freezing to 6°C Correction Fact USDA Regulated Soil (*T) N/A, water sample)	or: 10.	Biological Tissue Frozen? Yes No NA ate and Initials of Person Examining Contents:
Did samples originate in a quarantine zone within the United ! MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? If Yes to either question, fill out a Reg	□Ye	
		COMMENTS:
Chain of Custody Present?	□Yes □No □N/	
Chain of Custody Filled Out?	Tes ONO ON/	
Chain of Custody Relinquished?	DYES DNO DN/	
Sampler Name and/or Signature on COC?	□Yes □N/	
Samples Arrived within Hold Time?	Yes ONO ON/	144 - TO 1144 -
Short Hold Time Analysis (<72 hr)?	Dres DNO DN/	
Rush Turn Around Time Requested?	DYes No ON/	and the street of the street o
Sufficient Volume?	Elyes Ono On/	
Correct Containers Used?	ØYes □No □N/	
-Pace Containers Used?	ØYes □No □N/	
Containers Intact?	Ves ONO ON/	
Filtered Volume Received for Dissolved Tests?	Yes ONO ONT	The telephone and an explain a contract Among Am
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	Der Bro, ON	
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation?	Dyes One ON/	13. □HNO₃¬ □HSO₃ □NaOH □HCI Sample# □
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	Yes No No	Initial when Lot # of added
Headspace in VOA Vials (>6mm)?	□Yes □No □N//	
Trip Blank Present?	□Yes □No ☑N/	
Trip Blank Custody Seals Present?	□Yes □No ☑N//	The second secon
Pace Trip Blank Lot # (if purchased):		
CLIENT NOTIFICATION/RESOLUTION		Field Data Required? Yes No
Person Contacted: Waller Cha	Al	Date/Time: L/291
Comments/Resolution: TMISSUS- A	eample dilar	or exist" per elect.
Project Manager Review: Note: Whenever there is a discrepancy affecting North Carolina coold, incorrect preservative, out of temp, incorrect containers).	impliance samples, a copy of	Date: \(\subseteq \lambda \lam

Due Date: .07/10/15

PM: MMW CLIENT PACE MPLS

Workorder Name: RCRA-CERLCA-CALCINER

Results Requested By:

7/10/2015

Owner Received Date:

6/27/2015

Page 26 of 27

Workorder: 10312267

Kabor Xiong Company of the second s

Pace Analytical Services, Inc. 1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Fax (612)607-6444

315 Chestnut Street Virginia, MN 55792

6/26/2015 09:30 6/26/2015 09:05 10312267002 10312267001 Water Water

6/26/2015 10:05 10312267003 Water

PS PS

RQS 6/26/2015 10:30

PS

10312267006

Water

Received By

180/15 13 Date/Time

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002

8 853

LAB USE ONLY

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

Custody Seal

Y)or

Z

Received on Ice

3

z

Samples Intact (V) or

Z

This chain of custody is considered complete as is since this information is available in the owner laboratory

31 Belo Date/Time

Released By

5051704

Transfers

505108A(ABC)

Cooler Temperature on Receipt 23/29 °C

Monday, June 29, 2015 12:31:35 PM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1

505604

505121A

Phone (218)742-1042

Phos

HN03 The Reputation Containers

(6010

Pace Analytical Virginia MN

ace Analytical "

hold, incorrect preservative, out of temp, incorrect containers)

Document Name: Sample Condition Upon Receipt Form Document No.:

Document Revised: 23Feb2015 Page 1 of 1 Issuing Authority:

F-VM-C-001-Rev.09 Pace Virginia, Minnesota Quality Office Sample Condition Client Name: Project #: Upon Receipt WO#:1249367 Courier: Fed Ex UPS **USPS** Client ☐ Commercial Pace Other: Tracking Number: Custody Seal on Cooler/Box Present? YES DNo Seals Intact? Tres Optional: No Proj. Due Date: Proj. Name: Packing Material: Bubble Wrap Bubble Bags None Other: Temp Blank? Ves No Thermometer Used: 140792808 Type of Ice: Blue Samples on ice, cooling process has begun None Cooler Temp Read *C: 2.0/2.6 Cooler Temp Corrected *C: 2.3

Temp should be above freezing to 6°C Correction Factor: 40.3 Blological Tissue Frozen? Yes Date and Initials of Person Examining Contents: Chain of Custody Present? Ves No □N/A 1. Chain of Custody Filled Out? Yes □No DN/A 2. Chain of Custody Relinquished? WYes. □No DN/A Sampler Name and Signature on COC? Yes □No DAYA 4. Samples Arrived within Hold Time? Yes □No □N/A 5. Short Hold Time Analysis (<72 hr)? Yes NO □N/A Rush Turn Around Time Requested? Yes SANO □N/A Sufficient Volume? Yes DNo □N/A Correct Containers Used? Yes □No □N/A -Pace Containers Used? Yes □No □N/A Containers Intact? >Ves □No DN/A Filtered Volume Received for Dissolved Tests? Yes No D-MA/A 11. Note if sediment is visible in the dissolved containers. Sample Labels Match COC? 12. Redd one sample for as + a sample DANS DN/A -Includes Date/Time/ID/Analysis Matrix: bor out +ous (notoncec). Use all 3 See pH log for results and additional preservation All containers needing acid/base preservation will be Yes DNo □N/A checked and documented in the pH logbook. documentation Headspace in Methyl Mercury Container CO3 Rer Tyes □No WN/A 13. Headspace in VOA Vials (>6mm)? mio Yes □No DIN/A 14. Trip Blank Present? ☐ Yes □No DA/A 15. Trip Blank Custody Seals Present? Yes □No WN/A Pace Trip Blank Lot # (if purchased): CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No Person Contacted: Date/Time: Comments/Resolution: FECAL WAIVER ON FILE TEMPERATURE WAIVER ON FILE Y N Project Manager Review: Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of





May 20, 2015

Ericka Vallance Hydrometrics 3020 Bozeman Ave Helena, MT 59601

RE: Project: FMC RCRA

Pace Project No.: 10305190

Dear Ericka Vallance:

Enclosed are the analytical results for sample(s) received by the laboratory between May 06, 2015 and May 07, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kabor Xiong

kabor.xiong@pacelabs.com

Kalon Xiong

Project Manager

Enclosures

cc: Rob Hartman, MWH Americas, Inc. Bradly Maddock, FMC Carrie Ross, FMC Bruce Wallin, ECCI



150 N Ninth Street Billings, MT 59101 (406)254-7226



CERTIFICATIONS

Project: **FMC RCRA** Pace Project No.: 10305190

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01 Alaska Certification #: UST-078 Alaska Certification #MN00064 Alabama Certification #40770 Arizona Certification #: AZ-0014 Arkansas Certification #: 88-0680 California Certification #: 01155CA Colorado Certification #Pace Connecticut Certification #: PH-0256 EPA Region 8 Certification #: 8TMS-L

Florida/NELAP Certification #: E87605 Guam Certification #:14-008r Georgia Certification #: 959 Georgia EPD #: Pace

Idaho Certification #: MN00064 Hawaii Certification #MN00064 Illinois Certification #: 200011 Indiana Certification#C-MN-01 Iowa Certification #: 368

Kansas Certification #: E-10167 Kentucky Dept of Envi. Protection - DW #90062 Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086 Louisiana DHH #: LA140001 Maine Certification #: 2013011 Maryland Certification #: 322 Michigan DEPH Certification #: 9909 Minnesota Certification #: 027-053-137 Mississippi Certification #: Pace Montana Certification #: MT0092 Nevada Certification #: MN_00064 Nebraska Certification #: Pace New Jersey Certification #: MN-002 New York Certification #: 11647 North Carolina Certification #: 530 North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Certification #: MN200001 Oregon Certification #: MN300001 Pennsylvania Certification #: 68-00563

Puerto Rico Certification Saipan (CNMI) #:MP0003 South Carolina #:74003001 Texas Certification #: T104704192 Tennessee Certification #: 02818 Utah Certification #: MN000642013-4 Virginia DGS Certification #: 251 Virginia/VELAP Certification #: Pace Washington Certification #: C486 West Virginia Certification #: 382 West Virginia DHHR #:9952C Wisconsin Certification #: 999407970



SAMPLE SUMMARY

Project: FMC RCRA
Pace Project No.: 10305190

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10305190001	505174	Water	05/05/15 09:30	05/06/15 10:00
10305190002	505177	Water	05/05/15 10:15	05/06/15 10:00
10305190003	505154	Water	05/05/15 10:55	05/06/15 10:00
10305190004	505178	Water	05/05/15 11:35	05/06/15 10:00
10305190005	505600	Water	05/05/15 11:55	05/06/15 10:00
10305190006	505173	Water	05/05/15 12:35	05/06/15 10:00
10305190007	505171	Water	05/05/15 13:25	05/06/15 10:00
10305190008	505CDI	Water	05/05/15 13:50	05/06/15 10:00
10305190009	505700	Water	05/05/15 15:20	05/06/15 10:00
10305190010	505172	Water	05/05/15 15:50	05/06/15 10:00
10305190011	505180	Water	05/05/15 17:15	05/07/15 10:15
10305190012	505147	Water	05/05/15 18:05	05/07/15 10:15
10305190013	505148	Water	05/05/15 18:45	05/07/15 10:15
10305190014	505149	Water	05/05/15 19:25	05/07/15 10:15
10305190015	505128	Water	05/06/15 07:55	05/07/15 10:15
10305190016	505127	Water	05/06/15 08:30	05/07/15 10:15
10305190017	505126	Water	05/06/15 09:05	05/07/15 10:15
10305190018	505124	Water	05/06/15 09:50	05/07/15 10:15
10305190019	505131	Water	05/06/15 10:40	05/07/15 10:15
10305190020	505114ABC	Water	05/06/15 13:30	05/07/15 10:15



SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305190

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10305190001	505174	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190002	505177	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190003	505154	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190004	505178	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
	SM 4500F/C	JFP	1	PASI-M	
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190005	505600	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190006	505173	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190007	505171	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305190

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10305190008	505CDI	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190009	505700	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190010	505172	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	KEO	1	PASI-M
0305190011	505180	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
	EPA 300.0	KEO	4	PASI-M	
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190012	505147	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190013	505148	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190014	505149	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190015	505128	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305190

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
10305190016	505127	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
10305190017	505126	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190018	505124	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190019	505131	EPA 6010	IP	2	PASI-M
		EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305190020	505114ABC	EPA 6010	IP	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M



Project: FMC RCRA
Pace Project No.: 10305190

Method: EPA 6010
Description: 6010 MET ICP

Client: FMC

Date: May 20, 2015

General Information:

20 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: FMC RCRA
Pace Project No.: 10305190

Method: EPA 6010

Description: 6010 MET ICP, Dissolved

Client: FMC

Date: May 20, 2015

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: FMC RCRA Pace Project No.: 10305190

Method: EPA 6020

Description: 6020 MET ICPMS

Client: FMC

Date: May 20, 2015

General Information:

20 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: FMC RCRA
Pace Project No.: 10305190

Method: EPA 6020

Description: 6020 MET ICPMS, Dissolved

Client: FMC

Date: May 20, 2015

General Information:

1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: FMC RCRA
Pace Project No.: 10305190

Method: SM 4500F/C

Description: SM4500F-C Fluoride

Client: FMC

Date: May 20, 2015

General Information:

4 samples were analyzed for SM 4500F/C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: WET/41683

- B: Analyte was detected in the associated method blank.
 - BLANK for HBN 353704 [WET/4168 (Lab ID: 1960611)
 - Fluoride

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: FMC RCRA
Pace Project No.: 10305190

Method: EPA 300.0

Description: 300.0 IC Anions

Client: FMC

Date: May 20, 2015

General Information:

20 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22728

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305190010

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1957263)
 - Sulfate
- MSD (Lab ID: 1957264)
 - Sulfate

QC Batch: WETA/22749

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10304479002,10305190020

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1958344)
 - Chloride
 - Fluoride
- MSD (Lab ID: 1958345)
 - ChlorideFluoride
- MSD (Lab ID: 1958347)
 - Nitrate as N

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305190

Method: EPA 350.1

Description: 350.1 Ammonia

Client: FMC

Date: May 20, 2015

General Information:

20 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: FMC RCRA
Pace Project No.: 10305190

Method: SM 4500-P E

Description: Phosphate, Ortho Low Level

Client: FMC

Date: May 20, 2015

General Information:

20 samples were analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505174	Lab ID:	10305190001	Collecte	d: 05/05/15	09:30	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 14:26	7440-43-9	
Potassium	12.8	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 14:26	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.0035	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:08	7440-38-2	
Selenium	0.0049	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:08	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	190	mg/L	6.0	3.0	5		05/06/15 18:50	16887-00-6	
Fluoride	0.77	mg/L	0.050	0.0036	1		05/06/15 15:16	16984-48-8	
Nitrate as N	4.7	mg/L	0.10	0.050	1		05/06/15 15:16	14797-55-8	
Sulfate	93.8	mg/L	1.2	0.60	1		05/06/15 15:16	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:07	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.028	mg/L	0.0050	0.0017	1		05/06/15 13:41		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505177	Lab ID:	10305190002	Collecte	d: 05/05/15	10:15	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 14:52	7440-43-9	
Potassium	13.3	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 14:52	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0042	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:13	7440-38-2	
Selenium	0.0042	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:13	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	169	mg/L	6.0	3.0	5		05/06/15 19:08	16887-00-6	
Fluoride	0.72	mg/L	0.050	0.0036	1		05/06/15 15:31	16984-48-8	
Nitrate as N	4.2	mg/L	0.10	0.050	1		05/06/15 15:31	14797-55-8	
Sulfate	71.6	mg/L	1.2	0.60	1		05/06/15 15:31	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:09	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	0.028	mg/L	0.0050	0.0017	1		05/06/15 13:44		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505154	Lab ID:	10305190003	Collecte	d: 05/05/15	10:55	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 14:57	7440-43-9	
Potassium	14.4	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 14:57	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0043	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:36	7440-38-2	
Selenium	0.0032	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:36	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	190	mg/L	6.0	3.0	5		05/06/15 19:26	16887-00-6	
Fluoride	1.0	mg/L	0.050	0.0036	1		05/06/15 15:46	16984-48-8	
Nitrate as N	2.8	mg/L	0.10	0.050	1		05/06/15 15:46	14797-55-8	
Sulfate	55.7	mg/L	1.2	0.60	1		05/06/15 15:46	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:09	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.025	mg/L	0.0050	0.0017	1		05/06/15 13:45		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505178	Lab ID:	10305190004	Collecte	d: 05/05/15	11:35	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:10	7440-43-9	
Potassium	24.3	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:10	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.0088	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:54	7440-38-2	
Selenium	0.0060	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:54	7782-49-2	
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C						
Fluoride	0.29J	mg/L	1.0	0.051	1		05/09/15 11:27	16984-48-8	В
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	565	mg/L	12.0	6.0	10		05/06/15 19:43	16887-00-6	
Fluoride	0.30	mg/L	0.050	0.0036	1		05/06/15 16:01	16984-48-8	
Nitrate as N	5.7	mg/L	0.10	0.050	1		05/06/15 16:01	14797-55-8	
Sulfate	374	mg/L	12.0	6.0	10		05/06/15 19:43	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:11	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.039	mg/L	0.0050	0.0017	1		05/06/15 13:46		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505600	Lab ID:	10305190005	Collecte	d: 05/05/15	11:55	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:16	7440-43-9	
Potassium	22.9	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:16	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	0.0088	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 18:59	7440-38-2	
Selenium	0.0058	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 18:59	7782-49-2	
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C						
Fluoride	0.28J	mg/L	1.0	0.051	1		05/09/15 11:32	16984-48-8	В
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	581	mg/L	12.0	6.0	10		05/06/15 20:18	16887-00-6	
Fluoride	0.30	mg/L	0.050	0.0036	1		05/06/15 16:16	16984-48-8	
Nitrate as N	5.7	mg/L	0.10	0.050	1		05/06/15 16:16		
Sulfate	388	mg/L	12.0	6.0	10		05/06/15 20:18	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:13	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.039	mg/L	0.0050	0.0017	1		05/06/15 13:47		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505173	Lab ID:	10305190006	Collecte	d: 05/05/15	5 12:35	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:23	7440-43-9	
Potassium	14.0	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:23	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0032	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:03	7440-38-2	
Selenium	0.0046	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:03	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	218	mg/L	6.0	3.0	5		05/06/15 21:23	16887-00-6	
Fluoride	0.84	mg/L	0.050	0.0036	1		05/06/15 16:32	16984-48-8	
Nitrate as N	3.5	mg/L	0.10	0.050	1		05/06/15 16:32	14797-55-8	
Sulfate	66.7	mg/L	1.2	0.60	1		05/06/15 16:32	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:14	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.022	mg/L	0.0050	0.0017	1		05/06/15 13:47		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505171	Lab ID:	10305190007	Collecte	d: 05/05/15	13:25	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:28	7440-43-9	
Potassium	22.6	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:28	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	A 3020			
Arsenic	0.018	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:08	7440-38-2	
Selenium	0.0027	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:08	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	193	mg/L	6.0	3.0	5		05/06/15 21:40	16887-00-6	
Fluoride	0.54	mg/L	0.050	0.0036	1		05/06/15 16:47	16984-48-8	
Nitrate as N	5.4	mg/L	0.10	0.050	1		05/06/15 16:47	14797-55-8	
Sulfate	88.9	mg/L	1.2	0.60	1		05/06/15 16:47	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:15	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.10	mg/L	0.0050	0.0017	1		05/06/15 13:50		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505CDI	Lab ID:	10305190008	Collecte	d: 05/05/15	13:50	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:32	7440-43-9	
Potassium	ND	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:32	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	ND	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:12	7440-38-2	
Selenium	ND	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:12	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	ND	mg/L	1.2	0.60	1		05/06/15 17:02	16887-00-6	
Fluoride	ND	mg/L	0.050	0.0036	1		05/06/15 17:02	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		05/06/15 17:02	14797-55-8	
Sulfate	ND	mg/L	1.2	0.60	1		05/06/15 17:02	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:16	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	ND	mg/L	0.0050	0.0017	1		05/06/15 13:51		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505700	Lab ID:	10305190009	Collecte	d: 05/05/1	5 15:20	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:37	7440-43-9	
Potassium	ND	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:37	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.00021J	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:17	7440-38-2	
Selenium	ND	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:17	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	ND	mg/L	1.2	0.60	1		05/06/15 17:47	16887-00-6	
Fluoride	ND	mg/L	0.050	0.0036	1		05/06/15 17:47	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		05/06/15 17:47	14797-55-8	
Sulfate	ND	mg/L	1.2	0.60	1		05/06/15 17:47	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.021J	mg/L	0.040	0.020	1		05/19/15 12:16	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.0025J	mg/L	0.0050	0.0017	1		05/06/15 13:52		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505172	Lab ID:	10305190010	Collecte	d: 05/05/15	5 15:50	Received: 05/	06/15 10:00 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/07/15 09:41	05/07/15 15:41	7440-43-9	
Potassium	25.7	mg/L	2.5	0.13	1	05/07/15 09:41	05/07/15 15:41	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.021	mg/L	0.00050	0.00011	1	05/08/15 08:08	05/13/15 19:21	7440-38-2	
Selenium	0.0037	mg/L	0.00050	0.00020	1	05/08/15 08:08	05/13/15 19:21	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	119	mg/L	12.0	6.0	10		05/06/15 21:58	16887-00-6	
Fluoride	0.59	mg/L	0.050	0.0036	1		05/06/15 18:02	16984-48-8	
Nitrate as N	8.4	mg/L	1.0	0.50	10		05/06/15 21:58	14797-55-8	
Sulfate	73.9	mg/L	1.2	0.60	1		05/06/15 18:02	14808-79-8	M1
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:18	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.30	mg/L	0.025	0.0087	5		05/06/15 14:01		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505180	Lab ID:	10305190011	Collecte	d: 05/05/15	17:15	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 17:56	7440-43-9	
Potassium	32.8	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 17:56	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	A 3020			
Arsenic	0.044	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:24	7440-38-2	
Selenium	0.0044	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:24	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	130	mg/L	12.0	6.0	10		05/07/15 15:56	16887-00-6	
Fluoride	0.48	mg/L	0.050	0.0036	1		05/07/15 14:54	16984-48-8	
Nitrate as N	42.6	mg/L	1.0	0.50	10		05/07/15 15:56	14797-55-8	
Sulfate	129	mg/L	12.0	6.0	10		05/07/15 15:56	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	0.44	mg/L	0.025	0.0087	5		05/07/15 15:04		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505147	Lab ID:	10305190012	Collecte	d: 05/05/15	18:05	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:03	7440-43-9	
Potassium	12.1	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:03	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.0046	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:28	7440-38-2	
Selenium	0.0041	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:28	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	153	mg/L	6.0	3.0	5		05/07/15 22:47	16887-00-6	
Fluoride	0.70	mg/L	0.050	0.0036	1		05/07/15 15:09	16984-48-8	
Nitrate as N	4.4	mg/L	0.10	0.050	1		05/07/15 15:09	14797-55-8	
Sulfate	66.5	mg/L	1.2	0.60	1		05/07/15 15:09	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:41	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	0.033	mg/L	0.0050	0.0017	1		05/07/15 14:53		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505148	Lab ID:	10305190013	Collecte	d: 05/05/15	18:45	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:08	7440-43-9	
Potassium	13.4	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:08	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.0072	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:33	7440-38-2	
Selenium	0.0057	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:33	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	163	mg/L	6.0	3.0	5		05/07/15 23:05	16887-00-6	
Fluoride	0.76	mg/L	0.050	0.0036	1		05/07/15 15:24	16984-48-8	
Nitrate as N	3.6	mg/L	0.10	0.050	1		05/07/15 15:24	14797-55-8	
Sulfate	89.8	mg/L	1.2	0.60	1		05/07/15 15:24	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:42	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	0.062	mg/L	0.0050	0.0017	1		05/07/15 14:53		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505149	Lab ID:	10305190014	Collecte	d: 05/05/1	5 19:25	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	0.00075J	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:12	7440-43-9	
Potassium	11.7	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:12	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0068	mg/L	0.0010	0.00023	2	05/13/15 21:04	05/19/15 10:37	7440-38-2	
Selenium	0.0020	mg/L	0.0010	0.00040	2	05/13/15 21:04	05/19/15 10:37	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	114	mg/L	6.0	3.0	5		05/07/15 23:22	16887-00-6	
Fluoride	1.0	mg/L	0.050	0.0036	1		05/07/15 15:39	16984-48-8	
Nitrate as N	2.0	mg/L	0.10	0.050	1		05/07/15 15:39	14797-55-8	
Sulfate	59.4	mg/L	1.2	0.60	1		05/07/15 15:39	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:43	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	600-P E						
Orthophosphate as P	0.064	mg/L	0.0050	0.0017	1		05/07/15 14:54		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505128	Lab ID:	10305190015	Collecte	d: 05/06/1	5 07:55	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:17	7440-43-9	
Potassium	16.7	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:17	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.019	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:42	7440-38-2	
Selenium	0.0051	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:42	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	281	mg/L	6.0	3.0	5		05/08/15 00:10	16887-00-6	
Fluoride	0.45	mg/L	0.050	0.0036	1		05/07/15 16:42	16984-48-8	
Nitrate as N	6.9	mg/L	0.10	0.050	1		05/07/15 16:42	14797-55-8	
Sulfate	120	mg/L	6.0	3.0	5		05/08/15 00:10	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.026J	mg/L	0.040	0.020	1		05/19/15 12:45	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.16	mg/L	0.0050	0.0017	1		05/07/15 14:55		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505127	Lab ID:	10305190016	Collecte	d: 05/06/15	08:30	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:24	7440-43-9	
Potassium	14.1	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:24	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0077	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:47	7440-38-2	
Selenium	0.0069	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:47	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	298	mg/L	6.0	3.0	5		05/08/15 00:28	16887-00-6	
Fluoride	0.56	mg/L	0.050	0.0036	1		05/07/15 16:57	16984-48-8	
Nitrate as N	5.6	mg/L	0.10	0.050	1		05/07/15 16:57	14797-55-8	
Sulfate	194	mg/L	6.0	3.0	5		05/08/15 00:28	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.051	mg/L	0.040	0.020	1		05/19/15 12:47	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	00-P E						
Orthophosphate as P	0.080	mg/L	0.0050	0.0017	1		05/07/15 14:56		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505126	Lab ID:	10305190017	Collecte	d: 05/06/15	09:05	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:38	7440-43-9	
Potassium	9.3	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:38	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0077	mg/L	0.0010	0.00023	2	05/13/15 21:04	05/19/15 10:51	7440-38-2	
Selenium	0.0024	mg/L	0.0010	0.00040	2	05/13/15 21:04	05/19/15 10:51	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	95.3	mg/L	1.2	0.60	1		05/07/15 17:57	16887-00-6	
Fluoride	0.94	mg/L	0.050	0.0036	1		05/07/15 17:57	16984-48-8	
Nitrate as N	2.2	mg/L	0.10	0.050	1		05/07/15 17:57	14797-55-8	
Sulfate	86.5	mg/L	1.2	0.60	1		05/07/15 17:57	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:47	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.067	mg/L	0.0050	0.0017	1		05/07/15 14:57		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505124	Lab ID:	10305190018	Collecte	d: 05/06/15	5 09:50	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	0.00066J	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:43	7440-43-9	
Potassium	12.5	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:43	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.012	mg/L	0.0025	0.00056	5	05/13/15 21:04	05/19/15 10:56	7440-38-2	
Selenium	0.0047	mg/L	0.0025	0.0010	5	05/13/15 21:04	05/19/15 10:56	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	174	mg/L	6.0	3.0	5		05/08/15 01:34	16887-00-6	
Fluoride	0.78	mg/L	0.050	0.0036	1		05/07/15 18:13	16984-48-8	
Nitrate as N	3.1	mg/L	0.10	0.050	1		05/07/15 18:13	14797-55-8	
Sulfate	89.9	mg/L	1.2	0.60	1		05/07/15 18:13	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/19/15 12:48	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.088	mg/L	0.0050	0.0017	1		05/07/15 14:58		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505131	Lab ID:	10305190019	Collecte	d: 05/06/1	5 10:40	Received: 05/	/07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium	0.00090J	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:48	7440-43-9	
Potassium	13.6	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:48	7440-09-7	
6010 MET ICP, Dissolved	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Cadmium, Dissolved	0.0025J	mg/L	0.0030	0.00065	1	05/20/15 10:32	05/20/15 11:29	7440-43-9	
Potassium, Dissolved	13.7	mg/L	2.5	0.13	1	05/20/15 10:32	05/20/15 11:29	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.049	mg/L	0.00050	0.00011	1	05/13/15 21:04	05/19/15 11:19	7440-38-2	
Selenium	0.00086	mg/L	0.00050	0.00020	1	05/13/15 21:04	05/19/15 11:19	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic, Dissolved	0.050	mg/L	0.00050	0.00011	1	05/17/15 21:50	05/20/15 12:14	7440-38-2	
Selenium, Dissolved	0.00083	mg/L	0.00050	0.00020	1	05/17/15 21:50	05/20/15 12:14	7782-49-2	
SM4500F-C Fluoride	Analytical	Method: SM 4	500F/C						
Fluoride	0.13J	mg/L	1.0	0.051	1		05/09/15 11:36	16984-48-8	В
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	196	mg/L	6.0	3.0	5		05/08/15 01:52	16887-00-6	
Fluoride	74.8	mg/L	2.5	0.18	50		05/08/15 10:24	16984-48-8	
Nitrate as N	0.056J	mg/L	0.10	0.050	1		05/07/15 18:28	14797-55-8	
Sulfate	167	mg/L	6.0	3.0	5		05/08/15 01:52	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	0.037J	mg/L	0.040	0.020	1		05/19/15 12:49	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 4	500-P E						
Orthophosphate as P	6.1	mg/L	0.25	0.087	50		05/07/15 15:05		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Sample: 505114ABC	Lab ID:	10305190020	Collected	d: 05/06/15	13:30	Received: 05/	07/15 10:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepar	ation Meth	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/12/15 08:48	05/12/15 18:53	7440-43-9	
Potassium	26.6	mg/L	2.5	0.13	1	05/12/15 08:48	05/12/15 18:53	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepar	ation Meth	od: EPA	3020			
Arsenic	0.12	mg/L	0.00050	0.00011	1	05/13/15 21:04	05/19/15 11:23	7440-38-2	
Selenium	0.0022	mg/L	0.00050	0.00020	1	05/13/15 21:04	05/19/15 11:23	7782-49-2	
6M4500F-C Fluoride	Analytical	Method: SM 45	500F/C						
Fluoride	1.0	mg/L	1.0	0.051	1		05/09/15 11:42	16984-48-8	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	132	mg/L	6.0	3.0	5		05/08/15 00:46	16887-00-6	M1
Fluoride	1.5	mg/L	0.050	0.0036	1		05/07/15 17:12	16984-48-8	M1
Nitrate as N	ND	mg/L	0.10	0.050	1		05/07/15 17:12	14797-55-8	
Sulfate	99.5	mg/L	6.0	3.0	5		05/08/15 00:46	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	1.9	mg/L	0.040	0.020	1		05/19/15 12:50	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	1.5	mg/L	0.10	0.035	20		05/07/15 15:06		



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

QC Batch: MPRP/54199 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

METHOD BLANK: 1957936 Matrix: Water

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

Blank Reporting Units Qualifiers Parameter Result Limit Analyzed Cadmium mq/L ND 0.0030 05/07/15 14:18 Potassium ND 05/07/15 14:18 mg/L 2.5

LABORATORY CONTROL SAMPLE: 1957937 Spike LCS LCS % Rec Units Conc. Result % Rec Limits Qualifiers Parameter Cadmium 1 1.0 104 86-108 mg/L Potassium mg/L 10 10.5 105 85-108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1957939 1957938 MS MSD 10305190001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Cadmium mg/L ND 1.0 1.0 102 104 83-112 2 20 Potassium mg/L 12.8 10 10 22.6 23.4 99 106 82-118 3 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

QC Batch: MPRP/54258 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

METHOD BLANK: 1959726 Matrix: Water

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

Blank Reporting Units Qualifiers Parameter Result Limit Analyzed Cadmium mq/L ND 0.0030 05/12/15 17:48 Potassium ND 05/12/15 17:48 mg/L 2.5

LABORATORY CONTROL SAMPLE: 1959727 Spike LCS LCS % Rec Units Conc. Result % Rec Limits Qualifiers Parameter Cadmium 1 95 86-108 mg/L 0.95 Potassium mg/L 10 9.7 97 85-108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1959728 1959729 MS MSD 10305190020 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Cadmium mg/L ND 0.91 0.89 91 88 83-112 3 20 Potassium mg/L 26.6 10 10 35.9 34.9 93 83 82-118 3 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



FMC RCRA Project: Pace Project No.: 10305190

QC Batch: MPRP/54540 QC Batch Method:

EPA 3010

Analysis Method:

EPA 6010

Analysis Description:

6010 MET Dissolved

Associated Lab Samples: 10305190019

Parameter

METHOD BLANK: 1970917

Matrix: Water

Associated Lab Samples:

10305190019

Blank

Reporting

0.0030

Result Limit

Analyzed

Qualifiers

Cadmium, Dissolved Potassium, Dissolved

mg/L mg/L

Units

ND ND

05/20/15 11:21 2.5 05/20/15 11:21

LABORATORY CONTROL SAMPLE: 1970918

Parameter

Units

mg/L

mg/L

Spike Conc.

LCS % Rec % Rec Limits

Qualifiers

Cadmium, Dissolved Potassium, Dissolved mg/L mg/L

Result

0.0025J

13.7

Units

10

1.0 9.6

102 96

23.7

86-108 85-108

MSD

100

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

1970919

1970920

MSD

Spike

MSD

23.9

MS

102

% Rec

Max Limits **RPD** RPD

Parameter Cadmium, Dissolved

Date: 05/20/2015 03:30 PM

Potassium, Dissolved

10305190019

MS Spike Conc.

10

MS Conc. Result

10

LCS

Result

Result 1.0 1.0

% Rec % Rec 100 100

83-112

0

Qual 20 82-118 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

QC Batch: MPRP/54201 Analysis Method: EPA 6020
QC Batch Method: EPA 3020 Analysis Description: 6020 MET

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

METHOD BLANK: 1957962 Matrix: Water

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

Blank Reporting Units Qualifiers Parameter Result Limit Analyzed Arsenic mq/L ND 0.00050 05/13/15 17:59 Selenium ND 0.00050 05/13/15 17:59 mg/L

LABORATORY CONTROL SAMPLE: 1957963 Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Arsenic 0.077 92-110 mg/L .08 96 Selenium mg/L .08 0.075 94 93-112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1957965 1957964 MS MSD 10305190002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Arsenic mg/L 0.0042 .08 .08 0.081 0.081 96 96 89-114 0 20 Selenium mg/L 0.0042 .08 .08 0.081 0.082 95 97 85-117 2 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

QC Batch: MPRP/54291 Analysis Method: EPA 6020
QC Batch Method: EPA 3020 Analysis Description: 6020 MET

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

METHOD BLANK: 1961104 Matrix: Water

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

Blank Reporting Units Qualifiers Parameter Result Limit Analyzed Arsenic mq/L ND 0.00050 05/19/15 10:19 Selenium ND 0.00050 05/19/15 10:19 mg/L

LABORATORY CONTROL SAMPLE: 1961105 Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Arsenic 0.081 92-110 mg/L .08 101 Selenium mg/L .08 0.081 101 93-112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1961106 1961107 MS MSD 10305190020 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Arsenic mg/L 0.12 .08 .08 0.21 0.21 102 109 89-114 3 20 Selenium mg/L 0.0022 .08 .08 0.081 0.082 98 100 85-117 2 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

QC Batch: MPRP/5449
QC Batch Method: EPA 3020

MPRP/54494 Analysis Method:

EPA 6020

Analysis Description:

6020 MET Dissolved

Qualifiers

Associated Lab Samples: 10305190019

METHOD BLANK: 1968326

Matrix: Water

Associated Lab Samples:

10305190019

Blank Reporting

Parameter Units

Arsenic, Dissolved mg/L
Selenium, Dissolved mg/L

 Result
 Limit
 Analyzed

 ND
 0.00050
 05/19/15 15:00

 ND
 0.00050
 05/19/15 15:00

LABORATORY CONTROL SAMPLE:

Parameter

Arsenic, Dissolved

Selenium, Dissolved

Date: 05/20/2015 03:30 PM

1968327

Units

mg/L

mg/L

Spike LCS LCS % Rec Result Conc. % Rec Limits Qualifiers .08 0.078 98 92-110 .08 0.085 106 93-112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

1968328

1968329

Parameter	Units	10305190019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved Selenium, Dissolved	mg/L mg/L	0.050 0.00083	.08	.08	0.13 0.086	0.13 0.085	95 106	96 105	89-114 85-117	1 1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

QC Batch: WET/41683 Analysis Method: SM 4500F/C

QC Batch Method: SM 4500F/C Analysis Description: SM4500F-C Fluoride

Associated Lab Samples: 10305190004, 10305190005, 10305190019, 10305190020

METHOD BLANK: 1960611 Matrix: Water

Associated Lab Samples: 10305190004, 10305190005, 10305190019, 10305190020

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Fluoride mg/L 0.13J 1.0 05/09/15 10:05

LABORATORY CONTROL SAMPLE: 1960612

Date: 05/20/2015 03:30 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Fluoride mg/L 5.0 100 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1960613 1960614

MS MSD 10304789001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Fluoride mg/L 5 5 1.2 5.8 6.6 93 109 80-120 13 20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1960615 1960616

MS MSD 10305190020 MS MSD MS Spike Spike MSD % Rec Max % Rec Limits RPD Parameter Units Result Conc. Conc. Result Result % Rec RPD Qual Fluoride 1.0 5 5 5.2 5.8 84 96 80-120 11 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

QC Batch: WETA/22728 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

METHOD BLANK: 1957261 Matrix: Water

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	05/06/15 14:46	
Fluoride	mg/L	ND	0.050	05/06/15 14:46	
Nitrate as N	mg/L	ND	0.10	05/06/15 14:46	
Sulfate	mg/L	ND	1.2	05/06/15 14:46	

LABORATORY CONTROL SAMPLE:	1957262	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	12.5	12.4	99	90-110	
Fluoride	mg/L	1	0.96	96	90-110	
Nitrate as N	mg/L	1	0.93	93	90-110	
Sulfate	mg/L	12.5	11.8	94	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPLIC	ATE: 19572	63		1957264							
			MS	MSD								
		10305190010	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	119	125	125	249	249	105	104	90-110	0	20	
Fluoride	mg/L	0.59	1	1	1.5	1.5	91	92	90-110	0	20	
Nitrate as N	mg/L	8.4	10	10	19.3	19.2	108	107	90-110	1	20	
Sulfate	mg/L	73.9	12.5	12.5	78.6	78.7	38	39	90-110	0	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

QC Batch: WETA/22749 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

METHOD BLANK: 1958342 Matrix: Water

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	05/07/15 16:27	
Fluoride	mg/L	ND	0.050	05/07/15 16:27	
Nitrate as N	mg/L	ND	0.10	05/07/15 16:27	
Sulfate	mg/L	ND	1.2	05/07/15 16:27	

LABORATORY CONTROL SAMPLE:	1958343	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	12.5	12.5	100	90-110	
Fluoride	mg/L	1	0.98	98	90-110	
Nitrate as N	mg/L	1	0.94	94	90-110	
Sulfate	mg/L	12.5	11.9	95	90-110	

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	ATE: 19583	44		1958345							
	1	10305190020	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	132	62.5	62.5	186	185	85	85	90-110	0	20	M1
Fluoride	mg/L	1.5	1	1	3.6	3.6	214	213	90-110	0	20	M1
Nitrate as N	mg/L	ND	1	1	0.95	0.95	90	90	90-110	0	20	
Sulfate	mg/L	99.5	62.5	62.5	156	156	91	91	90-110	0	20	

MATRIX SPIKE & MATRIX SP	PIKE DUPLIC	CATE: 19583	46		1958347	•						· ·
			MS	MSD								
		10304479002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	<0.60	12.5	12.5	12.6	12.4	98	97	90-110	1	20	
Fluoride	mg/L	< 0.0036	1	1	0.99	0.97	99	97	90-110	2	20	
Nitrate as N	mg/L	< 0.050	1	1	0.93	0.92	90	89	90-110	1	20	M1
Sulfate	mg/L	< 0.60	12.5	12.5	12.0	11.8	93	92	90-110	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

QC Batch: WETA/22894 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

METHOD BLANK: 1968595 Matrix: Water

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Nitrogen, Ammonia mg/L ND 0.040 05/19/15 12:02

LABORATORY CONTROL SAMPLE: 1968596

Date: 05/20/2015 03:30 PM

LCS LCS Spike % Rec Parameter Units Conc. Result % Rec Limits Qualifiers 1 1.0 100 90-110 Nitrogen, Ammonia mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968597 1968598

MS MSD MSD 10305844001 Spike Spike MS MS MSD % Rec Max Units Conc. Result % Rec % Rec RPD RPD Parameter Result Conc. Result Limits Qual Nitrogen, Ammonia ND 1 1.0 1.0 101 101 90-110 20 mg/L 1 0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968599 1968600

MS MSD 10305190010 MS MSD MS MSD Spike Spike % Rec Max Parameter % Rec Units Conc. % Rec Limits RPD RPD Qual Result Conc. Result Result Nitrogen, Ammonia mg/L ND 1.0 0.98 100 97 90-110 3 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

QC Batch: WETA/22895 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

METHOD BLANK: 1968605 Matrix: Water

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Nitrogen, Ammonia mg/L ND 0.040 05/19/15 12:29

LABORATORY CONTROL SAMPLE: 1968606

Date: 05/20/2015 03:30 PM

LCS LCS Spike % Rec Parameter Units Conc. Result % Rec Limits Qualifiers 1 95 90-110 Nitrogen, Ammonia mg/L 0.95

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968607 1968608

MS MSD MSD 10305190011 Spike MS MS MSD % Rec Spike Max Units Result Conc. % Rec % Rec RPD RPD Parameter Conc. Result Result Limits Qual Nitrogen, Ammonia ND 1 1.0 1.0 103 103 90-110 20 mg/L 1 0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968609 1968610

MS MSD 10305190020 MS MSD MS MSD Spike Spike % Rec Max Parameter % Rec Units Conc. % Rec Limits RPD RPD Qual Result Conc. Result Result Nitrogen, Ammonia mg/L 1.9 3.0 2.9 106 102 90-110 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305190

QC Batch: WETA/22727 Analysis Method: SM 4500-P E

QC Batch Method: SM 4500-P E Analysis Description: SM4500P-E, Phosphate, Ortho

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

METHOD BLANK: 1957194 Matrix: Water

Associated Lab Samples: 10305190001, 10305190002, 10305190003, 10305190004, 10305190005, 10305190006, 10305190007,

10305190008, 10305190009, 10305190010

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Orthophosphate as P mg/L ND 0.0050 05/06/15 13:40

LABORATORY CONTROL SAMPLE: 1957195

Date: 05/20/2015 03:30 PM

LCS LCS Spike % Rec Parameter Units Conc. Result % Rec Limits Qualifiers .1 95 90-110 Orthophosphate as P 0.095 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1957196 1957197

MS MSD MSD % Rec 10305190001 Spike MS MS MSD Spike Max Units Conc. Result % Rec % Rec RPD Parameter Result Conc. Result Limits RPD Qual Orthophosphate as P 0.028 .1 0.12 0.12 80-120 30 mg/L .1 94 96

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1957198 1957199

MS MSD 10304959003 MSD MS MSD Spike Spike MS % Rec Max Parameter Units Conc. % Rec % Rec Limits RPD RPD Qual Result Conc. Result Result Orthophosphate as P mg/L ND 0.094 0.095 94 95 80-120 30 .1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Qualifiers



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305190

QC Batch: WETA/22750 Analysis Method: SM 4500-P E

QC Batch Method: SM 4500-P E Analysis Description: SM4500P-E, Phosphate, Ortho

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

METHOD BLANK: 1958361 Matrix: Water

Associated Lab Samples: 10305190011, 10305190012, 10305190013, 10305190014, 10305190015, 10305190016, 10305190017,

10305190018, 10305190019, 10305190020

Blank Reporting
Parameter Units Result Limit Analyzed

Parameter Units Result Limit Analyzed Qualifiers

Orthophosphate as P mg/L ND 0.0050 05/07/15 15:08

LABORATORY CONTROL SAMPLE: 1958362

Date: 05/20/2015 03:30 PM

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits

Orthophosphate as P mg/L .1 0.096 96 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1958363 1958364

MS MSD MSD MS 10305190020 Spike Spike MS MSD % Rec Max RPD RPD Parameter Units Result Conc. Result Result % Rec % Rec Limits Conc. Qual Orthophosphate as P mg/L 1.5 2 2 3.4 3.4 93 80-120 30

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: FMC RCRA
Pace Project No.: 10305190

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

Date: 05/20/2015 03:30 PM

B Analyte was detected in the associated method blank.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10305190001	505174	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
10305190002	505177	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190003	505154	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190004	505178	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190005	505600	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190006	505173	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190007	505171	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190008	505CDI	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190009	505700	EPA 3010	MPRP/54199		ICP/23694
0305190010	505172	EPA 3010	MPRP/54199	EPA 6010	ICP/23694
0305190011	505180	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190012	505147	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190013	505148	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190014	505149	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190015	505128	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190016	505127	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190017	505126	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190018	505124	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190019	505131	EPA 3010	MPRP/54258	EPA 6010	ICP/23744
0305190020	505114ABC	EPA 3010	MPRP/54258		ICP/23744
0305190019	505131	EPA 3010	MPRP/54540	EPA 6010	ICP/23831
0305190001	505174	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190002	505177	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190003	505154	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190004	505178	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190005	505600	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190006	505173	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190007	505171	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190008	505CDI	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190009	505700	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190010	505172	EPA 3020	MPRP/54201	EPA 6020	ICPM/2422
0305190011	505180	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190012	505147	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190013	505148	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190014	505149	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190015	505128	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190016	505127	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190017	505126	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190018	505124	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190019	505131	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190020	505114ABC	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
0305190019	505131	EPA 3020	MPRP/54494	EPA 6020	ICPM/2435
0305190004	505178	SM 4500F/C	WET/41683		
0305190005	505600	SM 4500F/C	WET/41683		
0305190019	505131	SM 4500F/C	WET/41683		
10305190020	505114ABC	SM 4500F/C	WET/41683		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

ab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
0305190001	505174	EPA 300.0	WETA/22728		
0305190002	505177	EPA 300.0	WETA/22728		
0305190003	505154	EPA 300.0	WETA/22728		
0305190004	505178	EPA 300.0	WETA/22728		
0305190005	505600	EPA 300.0	WETA/22728		
0305190005	505173	EPA 300.0	WETA/22728		
305190007	505173	EPA 300.0	WETA/22728		
305190007	505CDI	EPA 300.0	WETA/22728		
305190009	505700	EPA 300.0	WETA/22728		
305190009	505172	EPA 300.0	WETA/22728		
305190011	505180	EPA 300.0	WETA/22749		
0305190012	505147	EPA 300.0	WETA/22749		
0305190012	505148	EPA 300.0	WETA/22749 WETA/22749		
0305190015	505149	EPA 300.0	WETA/22749 WETA/22749		
0305190015	505128	EPA 300.0	WETA/22749		
0305190016	505127	EPA 300.0	WETA/22749		
0305190017	505126	EPA 300.0	WETA/22749		
0305190017	505124	EPA 300.0	WETA/22749		
305190019	505131	EPA 300.0	WETA/22749 WETA/22749		
305190019	5051114ABC	EPA 300.0	WETA/22749 WETA/22749		
0305190001	505174	EPA 350.1	WETA/22894		
305190002	505177	EPA 350.1	WETA/22894		
305190002	505154	EPA 350.1	WETA/22894		
305190004	505178	EPA 350.1	WETA/22894		
305190005	505600	EPA 350.1	WETA/22894 WETA/22894		
305190006	505173	EPA 350.1	WETA/22894		
305190007	505171	EPA 350.1	WETA/22894		
305190007	505CDI	EPA 350.1	WETA/22894 WETA/22894		
305190009	505700	EPA 350.1	WETA/22894 WETA/22894		
305190009	505172	EPA 350.1	WETA/22894 WETA/22894		
0305190011	505180	EPA 350.1	WETA/22895		
305190011	505147	EPA 350.1	WETA/22895		
305190012	505148	EPA 350.1	WETA/22895		
305190014	505149	EPA 350.1	WETA/22895		
0305190014	505128	EPA 350.1	WETA/22895		
0305190016	505127	EPA 350.1	WETA/22895		
0305190017	505126	EPA 350.1	WETA/22895		
305190017	505124	EPA 350.1	WETA/22895 WETA/22895		
305190019	505131	EPA 350.1	WETA/22895 WETA/22895		
305190019	505131 505114ABC	EPA 350.1	WETA/22895 WETA/22895		
0305190001	505174	SM 4500-P E	WETA/22727		
0305190002	505177	SM 4500-P E	WETA/22727		
0305190002	505154	SM 4500-P E	WETA/22727		
0305190005	505178	SM 4500-P E	WETA/22727		
0305190004	505600	SM 4500-P E	WETA/22727		
0305190005	505173	SM 4500-P E	WETA/22727		



Project: FMC RCRA
Pace Project No.: 10305190

Date: 05/20/2015 03:30 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10305190007	505171	SM 4500-P E	WETA/22727		
10305190008	505CDI	SM 4500-P E	WETA/22727		
10305190009	505700	SM 4500-P E	WETA/22727		
10305190010	505172	SM 4500-P E	WETA/22727		
10305190011	505180	SM 4500-P E	WETA/22750		
10305190012	505147	SM 4500-P E	WETA/22750		
10305190013	505148	SM 4500-P E	WETA/22750		
10305190014	505149	SM 4500-P E	WETA/22750		
10305190015	505128	SM 4500-P E	WETA/22750		
10305190016	505127	SM 4500-P E	WETA/22750		
10305190017	505126	SM 4500-P E	WETA/22750		
10305190018	505124	SM 4500-P E	WETA/22750		
10305190019	505131	SM 4500-P E	WETA/22750		
10305190020	505114ABC	SM 4500-P E	WETA/22750		

Face Analytical"

Company:

Address:

Email To:

Phone:

CHAIN-OF-CUSTODY / Analytical Request Document

DRINKING WATER らなどである OTHER GROUND WATER Page: REGULATORY AGENCY RCRA $\overline{\Box}$ 2 Site Location STATE: NPDES ∏ UST The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. PO BOX 4111 POCATELLO ID 83202 Brian McGinnis Kabor Xiong Sompany Name: FMC Invoice Information: Attention: Brian Pace Quote Reference: Pace Project Manager: ace Profile #; Section C Address: Project Number: RCRA-CERCLA-CALCINER Required Project Information: Report To: Ericka Vallance, Hydrometrics Copy To: Rob Hartman, MWH Bruce Wallin, ECCI Project Name: FMC Purchase Order No. Section B brian.mcginnis@fmc.com POCATELLO, ID 83202 Fax PO BOX 4111 Section A Required Client Information: Requested Due Date/TAT: FMC

Requested Analysis Filtered (Y/N)

		삥	(dW		COLLECTED	CTED				P	vasa.	Preservatives		ÎΝΛ											
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6010	6010: Cadmium, Potassium; 6020: Arsenic, Selenium							ļ		1	-								-						
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Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1,5% per month for any invoices not paid within 30 days.

N/N

DATE Signed (MM/DD/YY):

Care

á

SIGNATURE of SAMPLER: PRINT Name of SAMPLER:

Page 52 of 55

4

SAMPLER NAME AND SIGNATURE

F-ALL-Q-020rev.08, 12-Oct-2007

Samples Intact (Y/N)

Cooler (Y/N) Custody Sealed

Received on

O. ui dwa1

Pace Analytical

hold, incorrect preservative, out of temp, incorrect containers).

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.13

Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority:
Pace Minnesota Quality Office

Client Name: Project #: WO#:10305190 Upon Receipt Courier: Fed Ex TUPS **USPS** Client Commercial SpeeDee Other: Tracking Number: Optional: Proj. Due Date: Proj. Name: Custody Seal on Cooler/Box Present? No No Packing Material: Bubble Wrap Bubble Bags None Other: Temp Blank? Yes No Thermometer B88A9130516413 □B88A912167504 ✓ Wet Type of Ice: Blue None Samples on ice, cooling process has begun Used: B88A0143310098 Cooler Temp Read (°C): Cooler Temp Corrected (°C): Biological Tissue Frozen? Yes No Temp should be above freezing to 6°C **Correction Factor:** Date and Initials of Person Examining Contents: USDA Regulated Soil (N/A, water sample) Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. Did samples originate from a foreign source (internationally, MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? Yes No including Hawaii and Puerto Rico)? TNo If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork. COMMENTS: Chain of Custody Present? Yes □No □N/A 1. Chain of Custody Filled Out? Yes □No 2. □N/A Ves Chain of Custody Relinquished? No □N/A 3. Sampler Name and/or Signature on COC? Yes □No □N/A 4. Samples Arrived within Hold Time? **Z**Yes □No □N/A 5. Short Hold Time Analysis (<72 hr)? **V**Yes □N/A 6. **Rush Turn Around Time Requested?** ∐Yes No □N/A 7. Sufficient Volume? Yes □No □N/A 8. Correct Containers Used? Yes □No □N/A 9. -Pace Containers Used? Yes □No □N/A Containers Intact? Yes □No □N/A 10. Filtered Volume Received for Dissolved Tests? □Yes □No ZN/A 11. Note if sediment is visible in the dissolved container Sample Labels Match COC? Yes □No □N/A -Includes Date/Time/ID/Analysis Matrix: All containers needing acid/base preservation have been **∏NaOH** HCI checked? □No □N/A All containers needing preservation are found to be in Sample # compliance with EPA recommendation? (HNO₃, H₂SO₄, HCl<2; NaOH >9 Sulfide, NaOH>12 Cvanide) □No □N/A Exceptions: VOA, Coliform, TOC, Oil and Grease, Initial when Lot # of added DRO/8015 (water) DOC Yes □No N/A completed: preservative: Headspace in VOA Vials (>6mm)? □Yes □No ØN/A 14. Trip Blank Present? Yes □No ØN/A 15. Trip Blank Custody Seals Present? Yes □No **I**N/A Pace Trip Blank Lot # (if purchased): **CLIENT NOTIFICATION/RESOLUTION** Field Data Required? Yes No Person Contacted: Date/Time: Comments/Resolution: Project Manager Review:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of

Pace Analytical"

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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Section A		Section B	7			Sec	Section C									-				_
Required	Client Information:	Required Project Information:	ration:			fnvo	invoice Information:	tion:	i						Page:	_	ğ			_
Company	FMC		llance, Hỳdi	ometrics		Atte	Attention:	Brian McGinnis	Ginnis			Г								7
Address:	PO BOX 4111	Copy To: Rob Hartin	Rob Hartman, MWH		-	Com	Сопрапу Name:	e: FMC				<u> </u>	SULAT	REGULATORY AGENCY	NCY				100 C	
	POCATELLO, ID 83202	Bruce Wallin, ECCI	Ilin, ECCI			Address:	ess:	PO BOX	PO BOX 4111 POCATELLO ID 83202	CATELL	O ID 83		NPDES	Ľ	GROUND WATER	WATER F	DRINK	DRINKING WATER	် ၂ ရှ	
Email 70:	brian.mcginnis@fmc.com	Purchase Order No.:				Pace	Pace Quote					T	UST	Þ.	RCRA	. L.	OTHER	~		
Phone:	Fax:	Project Name: FMC				Pace	Project	Kabor Xiong	buc	!		Š	Site Location	L						
Request	Requested Due Date/TAT:	Project Number: RCRA-CERCLA-CALCINER	A-CERCLA	-CALCINE	R	Pace	Pace Profile #:						STATE	 	۵					
											Request	ed Ana	ysis Fil	Requested Analysis Filtered (Y/N)	•					
	Section D Valid Matrix Codes Required Client Information MATRIX CODE	odes CODE		COLLECTED	Q.			Preservatives	ives	1 NA										
	GWALEK WATER 2T LID	BYB C=CC	COMPOSITE	• • • • • • • • • • • • • • • • • • • •	COMPOSITE	тестіои						SURC	1) - 1 - 1	(S) [2]		(N/A				
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**300.0- C	**300.0- Cl, SO4, Nitrate, F 6010: Cadmium, Potassium, 6020: Arsenic, Selenium	MalkerCo	Cave Hy	Hydrometria	Mellis	<u> </u>	ម៉	2	742		200		5775	10,15	2		7			
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F-ALL-Q-020rev.08, 12-Oct-2007

Pace Analytical*

Document Name:

Sample Condition Upon Receipt Form

Document No.:

Document Revised: 23Feb2015 Page 1 of 1

F-MN-L-213-rev.13

Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name:				Projec	it#:
opon keteipt	FA	<u>~~</u>				WO#∶10305190
Courier:	Fed Ex	UPS	USPS		Client	MOH · TASASTAA
Commercial	Pace	SpeeDee	Other			
Tracking Number:	8058 1698	8486				10205100
Custody Seal on Co	oler/Box Present?	Yes No		Seals In	tact?	10305190
Packing Material:	Bubble Wrap	☑Bubble Bags	∏No	ne 🗀]Other:_	Temp Blank? ☑Yes ☐No
Thermometer [B88A9130516413	B88A912167504		pe of Ice:	⋈w	et Blue None Samples on ice, cooling process has begun
Cooler Temp Read (c): 7.8	 Cooler Temp Cori	rected (°C	o: 5,	1	Biological Tissue Frozen? Yes No No
Temp should be abov	e freezing to 6°C	Correction Facto	-	103	Da	te and Initials of Person Examining Contents: 5/7/(5 30
USDA Regulated Soil	N/A, water samp	ole)				
Did samples originate i MS, NC, NM, NY, OK, O	n a quarantine zone v R. SC. TN. TX or WA (vithin the United S check mans\?	tates: AL,	AR, AZ, C	A, FL, GA, Nes	
if	Yes to either questi	on, fill out a Regu	ılated So	il Checkli		No including Hawaii and Puerto Rico)?
			· · · · · · · · · · · · · · · · · · ·			COMMENTS:
Chain of Custody Pres	sent?		ØÝes	□No	□N/A	1.
Chain of Custody Fille	d Out?		□Yes	□No	□n/a	2.
Chain of Custody Reli	nquished?		Yes	□No	□N/A	3.
Sampler Name and/o	r Signature on COC?		Yes	□No		4.
Samples Arrived with	in Hold Time?		Z Yes	□No	□N/A	5.
Short Hold Time Anal	ysis (<72 hr)?		□Xes	□No	□N/A	6.
Rush Turn Around Tir	ne Requested?		Yes	ZNo	□N/A	7
Sufficient Volume?			Yes	□No	□N/A	8.
Correct Containers Us	ed?		Yes	□No	□N/A	9.
-Pace Containers U	sed?		Yes	□No	□N/A	
Containers Intact?			Yes	□No	□N/A	10.
Filtered Volume Recei	ved for Dissolved Tes	ts?	Z√Yes	□No	□N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match	COC?	٠	Yes	□No	N/A	12.
-Includes Date/Tim	e/ID/Analysis Matri	<u>, W</u>	·			,
All containers needing checked?	acid/base preservati	on have been	CSI-			13. ⟨ ZHNO₃ ⟨ ZH₂SO₄
All containers needing	preservation are fou	nd to be in	Yes	∏No	□N/A	Sample # 01-12
compliance with EPA r	ecommendation?					1-12
(HNO ₃ , H ₂ SO ₄ , HCl<2; I Exceptions: VOA, Colif	vaOH >9 Sumde, NaO orm. TOC. Oil and Gre	H>12 Cyanide)	Yes	□No	□N/A	Initial when Lot # of added
DRO/8015 (water) DO	C C		∐Yes	□No	ØN/A	Initial when Lot # of added completed: preservative:
Headspace in VOA Via	s (>6mm)?		Yes	□No	ØN/A	14.
Trip Blank Present?	,		Yes	□No	ZN/A	15.
Trip Blank Custody Sea	ls Present?		Yes	□No	ZN/A	·
Pace Trip Blank Lot # (i	f purchased):	· ·				
	TJFICATION/RESOL					Field Data Required? Yes No
Person Contacted:						Date/Time:
Comments/Resolution	n:				.	
		<u> </u>				
	ager Review:	Kas	_	$\sum_{i=0}^{n}$	- n	Date: Man 7 2010
Note: Whenever there is a hold, incorrect preservative	a discrepancy affecting re, out of temp, incorre	r North €arolina com ect containers).	npliañteersa	umples, a	copy of th	is form will be sent to the North Carolina DEHNR Certification Office (i.e out of





May 26, 2015

Ericka Vallance Hydrometrics 3020 Bozeman Ave Helena, MT 59601

RE: Project: FMC RCRA

Pace Project No.: 10305724

Dear Ericka Vallance:

Enclosed are the analytical results for sample(s) received by the laboratory on May 09, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kabor Xiong

kabor.xiong@pacelabs.com

Kalon Xiong

Project Manager

Enclosures

cc: Rob Hartman, MWH Americas, Inc. Bradly Maddock, FMC Carrie Ross, FMC Bruce Wallin, ECCI



150 N Ninth Street Billings, MT 59101 (406)254-7226



CERTIFICATIONS

Project: **FMC RCRA** Pace Project No.: 10305724

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01 Alaska Certification #: UST-078 Alaska Certification #MN00064 Alabama Certification #40770 Arizona Certification #: AZ-0014 Arkansas Certification #: 88-0680 California Certification #: 01155CA Colorado Certification #Pace Connecticut Certification #: PH-0256 EPA Region 8 Certification #: 8TMS-L

Florida/NELAP Certification #: E87605 Guam Certification #:14-008r Georgia Certification #: 959 Georgia EPD #: Pace

Idaho Certification #: MN00064 Hawaii Certification #MN00064 Illinois Certification #: 200011 Indiana Certification#C-MN-01 Iowa Certification #: 368

Kansas Certification #: E-10167 Kentucky Dept of Envi. Protection - DW #90062 Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086 Louisiana DHH #: LA140001 Maine Certification #: 2013011 Maryland Certification #: 322 Michigan DEPH Certification #: 9909 Minnesota Certification #: 027-053-137 Mississippi Certification #: Pace Montana Certification #: MT0092 Nevada Certification #: MN_00064 Nebraska Certification #: Pace New Jersey Certification #: MN-002 New York Certification #: 11647 North Carolina Certification #: 530 North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150 Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507 Oregon Certification #: MN200001 Oregon Certification #: MN300001 Pennsylvania Certification #: 68-00563

Puerto Rico Certification Saipan (CNMI) #:MP0003 South Carolina #:74003001 Texas Certification #: T104704192 Tennessee Certification #: 02818 Utah Certification #: MN000642013-4 Virginia DGS Certification #: 251 Virginia/VELAP Certification #: Pace Washington Certification #: C486 West Virginia Certification #: 382 West Virginia DHHR #:9952C Wisconsin Certification #: 999407970





SAMPLE SUMMARY

Project: FMC RCRA
Pace Project No.: 10305724

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10305724001	505BTS	Water	05/07/15 17:05	05/09/15 09:05

(406)254-7226



SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305724

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10305724001	505BTS	EPA 6010	WBS	2	PASI-M
		EPA 6020	RJS	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M



Project: FMC RCRA
Pace Project No.: 10305724

Method: EPA 6010
Description: 6010 MET ICP

Client: FMC

Date: May 26, 2015

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:



Project: FMC RCRA Pace Project No.: 10305724

Method: EPA 6020

Description: 6020 MET ICPMS

Client: FMC

Date: May 26, 2015

General Information:

1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305724

Method: EPA 300.0

Description: 300.0 IC Anions

Client: FMC

Date: May 26, 2015

General Information:

1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22770

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305723001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1960678)
 - Fluoride
- MSD (Lab ID: 1960679)
 - Fluoride

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1960678)
 - Chloride
 - Nitrate as N
 - Sulfate
- MSD (Lab ID: 1960679)
 - Chloride
 - Nitrate as N
 - Sulfate

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305724

Method: EPA 350.1 Description: 350.1 Ammonia

Client: FMC

Date: May 26, 2015

General Information:

1 sample was analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22961

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10306104001,10306165002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

MS (Lab ID: 1971723)Nitrogen, Ammonia

Additional Comments:

Analyte Comments:

QC Batch: WETA/22961

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

MS (Lab ID: 1971723)
Nitrogen, Ammonia
MSD (Lab ID: 1971724)
Nitrogen, Ammonia



Project: FMC RCRA
Pace Project No.: 10305724

Method: SM 4500-P E

Description: Phosphate, Ortho Low Level

Client: FMC

Date: May 26, 2015

General Information:

1 sample was analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22771

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305629001,10305724001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1960682)
 - Orthophosphate as P
- MSD (Lab ID: 1960683)
 - Orthophosphate as P

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



ANALYTICAL RESULTS

Project: FMC RCRA
Pace Project No.: 10305724

Date: 05/26/2015 02:34 PM

Sample: 505BTS	Lab ID:	10305724001	Collecte	d: 05/07/15	17:05	Received: 05/	09/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/14/15 09:16	05/14/15 12:36	7440-43-9	
Potassium	5.9	mg/L	2.5	0.13	1	05/14/15 09:16	05/14/15 12:36	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	0.0044	mg/L	0.00050	0.00011	1	05/13/15 21:04	05/19/15 12:23	7440-38-2	
Selenium	0.0010	mg/L	0.00050	0.00020	1	05/13/15 21:04	05/19/15 12:23	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	30.2	mg/L	1.2	0.60	1		05/09/15 16:16	16887-00-6	
Fluoride	0.53	mg/L	0.050	0.0036	1		05/09/15 16:16	16984-48-8	
Nitrate as N	2.8	mg/L	0.10	0.050	1		05/09/15 16:16	14797-55-8	
Sulfate	59.9	mg/L	1.2	0.60	1		05/14/15 16:14	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:25	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.73	mg/L	0.050	0.017	10		05/09/15 13:29		M6



Project: FMC RCRA
Pace Project No.: 10305724

Date: 05/26/2015 02:34 PM

QC Batch: MPRP/54335
QC Batch Method: EPA 3010

Associated Lab Samples: 10305724001

Analysis Method: EPA 6010
Analysis Description: 6010 MET

METHOD BLANK: 1962912 Matrix: Water

Associated Lab Samples: 10305724001

Blank Reporting Parameter Units Result Limit Qualifiers Analyzed Cadmium ND 0.0030 05/14/15 12:02 mg/L Potassium mg/L ND 2.5 05/14/15 12:02

LABORATORY CONTROL SAMPLE: 1962913 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium mg/L 0.91 91 86-108 Potassium mg/L 10 9.1 85-108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1962915 1962914 MSD MS 10305723011 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium mg/L ND 0.97 0.99 97 98 83-112 20 Potassium mg/L 9.9 10 10 18.2 18.9 83 90 82-118 3 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA Pace Project No.: 10305724

QC Batch: MPRP/54291 QC Batch Method: EPA 3020

Arsenic

Selenium

Date: 05/26/2015 02:34 PM

Associated Lab Samples: 10305724001 Analysis Method: Analysis Description:

EPA 6020

6020 MET

METHOD BLANK: 1961104

Associated Lab Samples: 10305724001 Matrix: Water

Blank Reporting Parameter Units Result Limit Qualifiers Analyzed mg/L ND 0.00050 05/19/15 10:19 mg/L ND 0.00050 05/19/15 10:19

LABORATORY CONTROL SAMPLE: 1961105

Spike LCS LCS % Rec Result Parameter Units Conc. % Rec Limits Qualifiers Arsenic mg/L .08 0.081 101 92-110 Selenium mg/L .08 0.081 101 93-112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1961106 1961107 MS MSD

Parameter	Units	10305190020 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.12	.08	.08	0.21	0.21	102	109	89-114	3	20	
Selenium	mg/L	0.0022	.08	.08	0.081	0.082	98	100	85-117	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305724

Date: 05/26/2015 02:34 PM

QC Batch: WETA/22770 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 10305724001

METHOD BLANK: 1960676 Matrix: Water

Associated Lab Samples: 10305724001

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	05/09/15 14:56	
Fluoride	mg/L	ND	0.050	05/09/15 14:56	
Nitrate as N	mg/L	ND	0.10	05/09/15 14:56	
Sulfate	mg/L	ND	1.2	05/14/15 13:15	

LABORATORY CONTROL SAMPLE: 1960677 LCS LCS % Rec Spike Parameter Units Conc. Result % Rec Limits Qualifiers Chloride mg/L 12.5 12.4 100 90-110 Fluoride mg/L 0.98 98 90-110 1 mg/L Nitrate as N 1 0.93 93 90-110 Sulfate mg/L 12.5 11.8 94 90-110

MATRIX SPIKE & MATRIX SI	PIKE DUPLICA	ATE: 19606 ⁻	78		1960679							
	1	10305723001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	544	12.5	12.5	453	481	-732	-506	90-110	6	20	M6
Fluoride	mg/L	1.1	1	1	1.5	1.6	43	49	90-110	4	20	M1
Nitrate as N	mg/L	35.3	1	1	29.6	31.6	-568	-376	90-110	6	20	M6
Sulfate	mg/L	800	125	125	999	999	160	159	90-110	0	20	M6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: FMC RCRA
Pace Project No.: 10305724

QC Batch: WETA/22961 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia

Associated Lab Samples: 10305724001

METHOD BLANK: 1971719 Matrix: Water

Associated Lab Samples: 10305724001

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Nitrogen, Ammonia mg/L ND 0.040 05/21/15 11:03

LABORATORY CONTROL SAMPLE: 1971720

Date: 05/26/2015 02:34 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Nitrogen, Ammonia mg/L 1.1 106 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971721 1971722

MSD MS MS 10306165002 Spike Spike MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual < 0.050 1 1.1 90-110 20 Nitrogen, Ammonia mg/L 1 1.1 107 108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971723 1971724

MS MSD 10306104001 MS MSD MS MSD Spike Spike % Rec Max Parameter Units % Rec RPD Result Conc. Conc. Result Result % Rec Limits RPD Qual 2.2 Nitrogen, Ammonia mg/L 1.4 1 1 2.4 83 101 90-110 8 20 E,M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



SM 4500-P E

Analysis Method:

Project: FMC RCRA
Pace Project No.: 10305724

Date: 05/26/2015 02:34 PM

QC Batch: WETA/22771

QC Batch Method: SM 4500-P E Analysis Description: SM4500P-E, Phosphate, Ortho

Associated Lab Samples: 10305724001

METHOD BLANK: 1960680 Matrix: Water

Associated Lab Samples: 10305724001

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Orthophosphate as P mg/L ND 0.0050 05/09/15 13:07

LABORATORY CONTROL SAMPLE: 1960681

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Orthophosphate as P mg/L 0.097 97 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1960682 1960683

MS MSD MS MS 10305724001 Spike Spike MSD MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Orthophosphate as P 0.73 0.81 76 80-120 30 M6 mg/L .1 .1 0.81 77 0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1960684 1960685

MS MSD 10305629001 MS MSD MS MSD Spike Spike % Rec Max Parameter Units % Rec RPD Result Conc. Conc. Result Result % Rec Limits RPD Qual Orthophosphate as P mg/L 0.037 .1 .1 0.13 0.13 97 96 80-120 30

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: FMC RCRA
Pace Project No.: 10305724

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

Date: 05/26/2015 02:34 PM

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.



Project: FMC RCRA
Pace Project No.: 10305724

Date: 05/26/2015 02:34 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10305724001	505BTS	EPA 3010	MPRP/54335	EPA 6010	ICP/23779
10305724001	505BTS	EPA 3020	MPRP/54291	EPA 6020	ICPM/24324
10305724001	505BTS	EPA 300.0	WETA/22770		
10305724001	505BTS	EPA 350.1	WETA/22961		
10305724001	505BTS	SM 4500-P E	WETA/22771		

Face Analytical"

CHAIN-OF-CUSTODY / Analytical Request Document

The Chair-of-Gistrody is a LEGA! DOCUMENT. All relevant fields must be completed accurately.

105.05724

DRINKING WATER OTHER GROUND WATER Page: REGULATORY AGENCY $\underline{\bigcirc}$ RCRA > Site Location NPDES STATE □ UST PO BOX 4111 POCATELLO ID 83202 Brian McGinnis Kabor Xiong Sompany Name: FMC Invoice information: Attention. Brian Pace Quote Reference: Pace Project Manager: Section C ace Profile #: Address Project Number (RCRA) CERCLA-CALCINER Report To: Ericka Vallance, Hydrometrics Copy To: Rob Hartman, MWH Bruce Wallin, ECCI Section B Required Project Information: FMC Purchase Order No.: Project Name: -- brion-megipais@imc.com-POCATELLO, ID 83202 PO BOX 4111 Section A Required Client Information: Requested Due Date/TAT: FMC Sompany: ddress; Email To: Phone:

Requested Analysis Filtered (Y/N)

Section D Required Client Information	des CODE o left)	S CORUS CONTECTION	Sobe (George Code) Sob	# OF CON Thoresen Thoresen Thore Tho	WI G A A STATE OF	MY G		WT G	JS	25 WT G	WT G	J5 WT 6	MT 6	15 WT G	25 WI G	29 MM	NTS RELINQUISHED BY / AFFILIATION DATE TIME ACCEPTED BY / AFFILIATION DATE TIME SAMPLE CONDITIONS	Walter (50mm / Hadra material 5 1815-13 215 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	CIN O SALE MAN SALE M		i wells 108, 121, 122 &	i wells 108, 121, 122 &	SAMPLER NAME AND SIGNATURE	SAMPLER NAME AND SIGNATURE IVED ON IV	SAMPLER NAME AND SIGNATURE TO SHINT Name of SAMPLER: TO SHAPE SAMPLER: TO SAMPLER	SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: PRINT Name of SAMPLER: SIGNATURE of SAMPLER: DATE Signed	SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: No HER Cane Temp in °C Custody Sealed Custody Sealed (WM/DD/YY): 05/08/5 Samples Intact
		DRINKING WATER WATER WASER WASEL WATER PRODUCT SOIL/SOLID ON	WIFE AME OTHER IQUE TISSUE		505875	505	505	505	505	505	505	505	505	505	505	505	ADDITIONAL COMMENTS		6010: Cadmium, Potassium; 6020: Arsenic, Selenium	Total Phos sub to Pace-VM by 6010 only on wells 108, 121, 122 g.							

F-ALL-Q-020rev 08, 12-Oct-2007

Important Note. By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Page 18 of 19

Face Analytical*

Document Name:

Sample Condition Upon Receipt Form

Document No.:

F-MN-L-213-rev.13

Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority: Pace Minnesota Quality Office

Sample Condition Client Name: Upon Receipt			Project	* WO#: 10305724
FILE		***************************************		
Courier:	USPS		ient	
Commercial Pace Speed	f I d i d		-	10305724
Tracking Number: 8001 3891	1614	214000000000000000000000000000000000000		
Custody Seal on Cooler/Box Present? Yes	□No s	eals Inta	ict? Z	Yes No Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubble	e Bags 🔲 None		ther:	Temp Blank? ☐ Yes ☐ No
Thermometer	L2167504 Type	of Ice:	Ø We	t Blue None Samples on ice, cooling process has begun
	mp Corrected (°C):	2	2	Biological Tissue Frozen? Yes No N/A
Temp should be above freezing to 6°C Correction	on Factor: 🕎	2.3	Dat	e and Initials of Person Examining Contents:
USDA Regulated Soil (N/A, water sample)	Hathard Chahan Al Al	2 47 64	EL 64	
Did samples originate in a quarantine zone within the I MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check map	United States: AL, Al os)?	R, AZ, CA	, FL, GA, □ □Yes	ID, LA. Did samples originate from a foreign source (internationally, ID) ID
		Checklis		Q-338) and include with SCUR/COC paperwork.
				COMMENTS:
Chain of Custody Present?	Wes	□No	□N/A	1.
Chain of Custody Filled Out?	12/Yes	□No	□n/a	2.
Chain of Custody Relinquished?	Ves	□No	□n/a	3.
Sampler Name and/or Signature on COC?	Z Yes.	□No	□N/A	4,
Samples Arrived within Hold Time?	Wes	□No	□N/A	5.
Short Hold Time Analysis (<72 hr)?	Yes	□No/		6.
Rush Turn Around Time Requested?	[]Yes	₽No		7.
Sufficient Volume?			□N/A	
Correct Containers Used?	West .	□No	□N/A	8.
-Pace Containers Used?	Øys.	□No	□N/A	9.
Containers Intact?	ZiYes/	□No	□N/A	
	☑ Yes	□No	DNA	10.
Filtered Volume Received for Dissolved Tests?		□No	ØN/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	Yes	□No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:				
All containers needing acid/base preservation have be checked?	een Yes	□No		13. ☐HNO₃ ☐H₂SO₄ ☐NaOH ☐HCI
All containers needing preservation are found to be in	n	TINO	□N/A	Sample #
compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyal				
Exceptions: VOA, Coliform, TOC, Oil and Grease,	nide) 🛮 🗗 Yes	□No	□N/A	Initial when Lot # of added
DRO/8015 (water) DOC	☐Yes	□No	MA	Initial when Lot # of added completed: preservative:
Headspace in VOA Vials (>6mm)?	. []Yes	□No	PNA	14.
Trip Blank Present?	□Yes	□No	MNJK	15.
Trip Blank Custody Seals Present?	□Yes	□No	ZN/A	
Pace Trip Blank Lot # (if purchased):				
CLIENT NOTIFICATION/RESOLUTION				Field Data Required? Yes No
Person Contacted:				Date/Time:
Comments/Resolution:				Management department of the supplier regulation (see Section 2015) and
			-	
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	g	otriminani - caro	-/	





May 26, 2015

Ericka Vallance Hydrometrics 3020 Bozeman Ave Helena, MT 59601

RE: Project: FMC RCRA

Pace Project No.: 10305759

Dear Ericka Vallance:

Enclosed are the analytical results for sample(s) received by the laboratory on May 11, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kabor Xiong

kabor.xiong@pacelabs.com

Kalon Xiong

Project Manager

Enclosures

cc: Rob Hartman, MWH Americas, Inc. Bradly Maddock, FMC Carrie Ross, FMC Bruce Wallin, ECCI







CERTIFICATIONS

Project: **FMC RCRA** Pace Project No.: 10305759

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01 Alaska Certification #: UST-078 Alaska Certification #MN00064 Alabama Certification #40770 Arizona Certification #: AZ-0014 Arkansas Certification #: 88-0680 California Certification #: 01155CA Colorado Certification #Pace Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L Florida/NELAP Certification #: E87605 Guam Certification #:14-008r

Georgia Certification #: 959 Georgia EPD #: Pace

Idaho Certification #: MN00064 Hawaii Certification #MN00064 Illinois Certification #: 200011 Indiana Certification#C-MN-01 Iowa Certification #: 368

Kansas Certification #: E-10167 Kentucky Dept of Envi. Protection - DW #90062 Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086 Louisiana DHH #: LA140001

Maine Certification #: 2013011 Maryland Certification #: 322

Michigan DEPH Certification #: 9909

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792 Alaska Certification #: UST-078 Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace Montana Certification #: MT0092 Nevada Certification #: MN_00064 Nebraska Certification #: Pace New Jersey Certification #: MN-002 New York Certification #: 11647 North Carolina Certification #: 530

North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Certification #: MN200001 Oregon Certification #: MN300001 Pennsylvania Certification #: 68-00563

Puerto Rico Certification Saipan (CNMI) #:MP0003 South Carolina #:74003001 Texas Certification #: T104704192 Tennessee Certification #: 02818 Utah Certification #: MN000642013-4 Virginia DGS Certification #: 251 Virginia/VELAP Certification #: Pace Washington Certification #: C486 West Virginia Certification #: 382 West Virginia DHHR #:9952C

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin Certification #: 999407970

Wisconsin DNR Certification #: 998027470 WA Department of Ecology Lab ID# C1007



SAMPLE SUMMARY

Project: FMC RCRA
Pace Project No.: 10305759

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10305759001	505115	Water	05/06/15 14:55	05/11/15 09:05
10305759002	505113	Water	05/06/15 15:35	05/11/15 09:05
10305759003	505166	Water	05/06/15 16:50	05/11/15 09:05
10305759004	505168	Water	05/06/15 17:50	05/11/15 09:05
10305759005	505165	Water	05/06/15 18:35	05/11/15 09:05
10305759006	505167	Water	05/07/15 08:00	05/11/15 09:05
10305759007	505183	Water	05/07/15 09:10	05/11/15 09:05
10305759008	505158	Water	05/07/15 09:55	05/11/15 09:05
10305759009	505122	Water	05/07/15 11:05	05/11/15 09:05
10305759010	505123ABC	Water	05/07/15 12:00	05/11/15 09:05
10305759013	505155	Water	05/07/15 13:10	05/11/15 09:05
10305759014	505701	Water	05/07/15 14:00	05/11/15 09:05
10305759015	505156	Water	05/07/15 15:05	05/11/15 09:05
10305759016	505157ABC	Water	05/07/15 15:50	05/11/15 09:05
10305759017	505104	Water	05/07/15 14:20	05/11/15 09:05
10305759020	505601	Water	05/07/15 15:30	05/11/15 09:05



SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305759

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10305759001	505115	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759002	505113	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759003	505166	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759004	505168	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759005	505165	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759006	505167	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759007	505183	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759008	505158	EPA 6010	IP	2	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305759

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
10305759009	505122	EPA 6010	IP	2	PASI-M
		EPA 6010	MAR	1	PASI-V
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759010	505123ABC	EPA 6010	IP	2	PASI-M
		EPA 6010	MAR	1	PASI-V
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759013	505155	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759014	505701	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759015	505156	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0305759016	505157ABC	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC RCRA
Pace Project No.: 10305759

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
10305759017	505104	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
10305759020	505601	EPA 6010	IP	2	PASI-M
		EPA 6020	RAG	2	PASI-M
		SM 4500F/C	JFP	1	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M



Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 6010
Description: 6010 MET ICP

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MPRP/54323

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305759010,10305759016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 1963716)
 - Potassium

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 6020

Description: 6020 MET ICPMS

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305759

Method: SM 4500F/C

Description: SM4500F-C Fluoride

Client: FMC

Date: May 26, 2015

General Information:

6 samples were analyzed for SM 4500F/C. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: WET/41829

- B: Analyte was detected in the associated method blank.
 - BLANK for HBN 355002 [WET/4182 (Lab ID: 1968130)
 - Fluoride

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 300.0

Description: 300.0 IC Anions

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22789

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305759010,10305759016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1961704)
 - Chloride
 - Fluoride
 - Nitrate as N
- MSD (Lab ID: 1961705)
 - Chloride
 - Fluoride
 - Nitrate as N
- MSD (Lab ID: 1961707)
 - Nitrate as N

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1961706)
 - Fluoride
- MSD (Lab ID: 1961707)
 - Fluoride

R1: RPD value was outside control limits.

- MSD (Lab ID: 1961707)
 - Fluoride

Additional Comments:



Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 300.0

Description: 300.0 IC Anions

Client: FMC

Date: May 26, 2015

Analyte Comments:

QC Batch: WETA/22789

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

• MS (Lab ID: 1961704)

Sulfate

• MSD (Lab ID: 1961705)

Sulfate



Project: FMC RCRA
Pace Project No.: 10305759

Method: EPA 350.1

Description: 350.1 Ammonia

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22962

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10305759010,10305759016

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1971729)
 - Nitrogen, Ammonia
- MSD (Lab ID: 1971728)
 - Nitrogen, Ammonia
- MSD (Lab ID: 1971730)
 - Nitrogen, Ammonia

Additional Comments:



Project: FMC RCRA Pace Project No.: 10305759

Method: SM 4500-P E

Description: Phosphate, Ortho Low Level

Client: FMC

Date: May 26, 2015

General Information:

16 samples were analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.

- 505104 (Lab ID: 10305759017)
- 505113 (Lab ID: 10305759002)
- 505115 (Lab ID: 10305759001)
- 505122 (Lab ID: 10305759009)
- 505123ABC (Lab ID: 10305759010)
- 505155 (Lab ID: 10305759013)
- 505156 (Lab ID: 10305759015)
- 505157ABC (Lab ID: 10305759016)
- 505158 (Lab ID: 10305759008)
- 505165 (Lab ID: 10305759005)
- 505166 (Lab ID: 10305759003)
- 505167 (Lab ID: 10305759006)
- 505168 (Lab ID: 10305759004)
- 505183 (Lab ID: 10305759007)
- 505601 (Lab ID: 10305759020)
- 505701 (Lab ID: 10305759014)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505115	Lab ID:	10305759001	Collecte	d: 05/06/15	14:55	Received: 05/	11/15 09:05 M	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 02:47	7440-43-9	
Potassium	14.0	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 02:47	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.24	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:26	7440-38-2	
Selenium	0.0041	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:26	7782-49-2	
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C						
Fluoride	0.18J	mg/L	1.0	0.051	1		05/17/15 13:06	16984-48-8	В
300.0 IC Anions	Analytical	Method: EPA 3	300.0						
Chloride	141	mg/L	12.0	6.0	10		05/11/15 22:48	16887-00-6	
Fluoride	1.0	mg/L	0.050	0.0036	1		05/11/15 16:12		
Nitrate as N	63.6	mg/L	1.0	0.50	10		05/11/15 22:48		
Sulfate	337	mg/L	12.0	6.0	10		05/11/15 22:48	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:34	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	2.7	mg/L	0.10	0.035	20		05/12/15 11:21		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505113	Lab ID:	10305759002	Collecte	d: 05/06/15	5 15:35	5 Received: 05/11/15 09:05 Matrix: Water					
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010					
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 02:54	7440-43-9			
Potassium	17.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 02:54	7440-09-7			
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020					
Arsenic	0.027	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:29	7440-38-2			
Selenium	0.0037	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:29	7782-49-2			
300.0 IC Anions	Analytical	Method: EPA 3	0.00								
Chloride	117	mg/L	6.0	3.0	5		05/11/15 23:05	16887-00-6			
Fluoride	0.43	mg/L	0.050	0.0036	1		05/11/15 16:42	16984-48-8			
Nitrate as N	8.2	mg/L	0.50	0.25	5		05/11/15 23:05	14797-55-8			
Sulfate	87.0	mg/L	1.2	0.60	1		05/11/15 16:42	14808-79-8			
350.1 Ammonia	Analytical	Method: EPA 3	50.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:35	7664-41-7			
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E								
Orthophosphate as P	0.22	mg/L	0.010	0.0035	2		05/12/15 11:21		НЗ		



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505166	Lab ID:	10305759003	Collecte	d: 05/06/15	16:50	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 02:59	7440-43-9	
Potassium	31.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 02:59	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	A 3020			
Arsenic	0.018	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:32	7440-38-2	
Selenium	0.0060	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:32	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	234	mg/L	12.0	6.0	10		05/11/15 23:23	16887-00-6	
Fluoride	0.64	mg/L	0.050	0.0036	1		05/11/15 16:58	16984-48-8	
Nitrate as N	38.0	mg/L	1.0	0.50	10		05/11/15 23:23	14797-55-8	
Sulfate	203	mg/L	12.0	6.0	10		05/11/15 23:23	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:36	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.30	mg/L	0.010	0.0035	2		05/12/15 11:22		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505168	Lab ID: 10305759004 Collected: 05/06/15 17:50 Received: 05/11/15 09:05 Matrix: Wa								
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:05	7440-43-9	
Potassium	16.6	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:05	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.022	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:35	7440-38-2	
Selenium	0.076	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:35	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	53.7	mg/L	1.2	0.60	1		05/11/15 17:13	16887-00-6	
Fluoride	3.5	mg/L	0.50	0.036	10		05/11/15 23:40	16984-48-8	
Nitrate as N	20.6	mg/L	1.0	0.50	10		05/11/15 23:40	14797-55-8	
Sulfate	1350	mg/L	24.0	12.0	20		05/14/15 05:10	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.41	mg/L	0.040	0.020	1		05/21/15 11:37	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.095	mg/L	0.0050	0.0017	1		05/12/15 11:01		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505165	Lab ID:	10305759005	Collecte	d: 05/06/15	18:35	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:12	7440-43-9	
Potassium	14.5	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:12	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	A 3020			
Arsenic	0.023	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:38	7440-38-2	
Selenium	0.0085	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:38	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	365	mg/L	6.0	3.0	5		05/14/15 05:28	16887-00-6	
Fluoride	0.20	mg/L	0.050	0.0036	1		05/11/15 17:28	16984-48-8	
Nitrate as N	5.7	mg/L	0.10	0.050	1		05/11/15 17:28	14797-55-8	
Sulfate	232	mg/L	6.0	3.0	5		05/14/15 05:28	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.28	mg/L	0.010	0.0035	2		05/12/15 11:23		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505167	Lab ID:	10305759006	Collecte	d: 05/07/15	08:00	Received: 05/	Received: 05/11/15 09:05 Matrix: Water				
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010					
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:19	7440-43-9			
Potassium	12.6	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:19	7440-09-7			
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020					
Arsenic	0.046	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:40	7440-38-2			
Selenium	0.0022	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:40	7782-49-2			
300.0 IC Anions	Analytical	Method: EPA 3	0.00								
Chloride	133	mg/L	6.0	3.0	5		05/14/15 05:46	16887-00-6			
Fluoride	ND	mg/L	0.050	0.0036	1		05/11/15 17:43	16984-48-8			
Nitrate as N	0.14	mg/L	0.10	0.050	1		05/11/15 17:43	14797-55-8			
Sulfate	141	mg/L	6.0	3.0	5		05/14/15 05:46	14808-79-8			
350.1 Ammonia	Analytical	Method: EPA 3	50.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:39	7664-41-7			
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E								
Orthophosphate as P	4.4	mg/L	0.25	0.087	50		05/12/15 11:34		НЗ		



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505183	Lab ID:	10305759007	Collected	d: 05/07/15	09:10	Received: 05/	11/15 09:05 Ma	atrix: Water		
Parameters	Results	Units	PQL _	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010				
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:25	7440-43-9		
Potassium	12.7	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:25	7440-09-7		
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020				
Arsenic	0.014	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:43	7440-38-2		
Selenium	0.0060	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:43	7782-49-2		
300.0 IC Anions	Analytical Method: EPA 300.0									
Chloride	104	mg/L	6.0	3.0	5		05/14/15 06:03	16887-00-6		
Fluoride	0.34	mg/L	0.050	0.0036	1		05/11/15 17:58	16984-48-8		
Nitrate as N	1.9	mg/L	0.10	0.050	1		05/11/15 17:58	14797-55-8		
Sulfate	211	mg/L	6.0	3.0	5		05/14/15 06:03	14808-79-8		
350.1 Ammonia	Analytical	Method: EPA 3	50.1							
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:41	7664-41-7		
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E							
Orthophosphate as P	0.053	mg/L	0.0050	0.0017	1		05/12/15 11:03		НЗ	



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505158	Lab ID:	10305759008	Collected	d: 05/07/15	09:55	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL _	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:40	7440-43-9	
Potassium	19.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:40	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	0.011	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:46	7440-38-2	
Selenium	0.0054	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:46	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	97.2	mg/L	12.0	6.0	10		05/14/15 06:21	16887-00-6	
Fluoride	0.17	mg/L	0.050	0.0036	1		05/11/15 18:58	16984-48-8	
Nitrate as N	2.9	mg/L	0.10	0.050	1		05/11/15 18:58	14797-55-8	
Sulfate	545	mg/L	12.0	6.0	10		05/14/15 06:21	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:43	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.082	mg/L	0.0050	0.0017	1		05/12/15 11:04		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505122	Lab ID:	10305759009	Collecte	Collected: 05/07/15 11:05		Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	3010			
Phosphorus	10200	ug/L	250	12.9	1	05/14/15 15:58	05/19/15 10:24	7723-14-0	
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:47	7440-43-9	
Potassium	131	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:47	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	0.051	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:55	7440-38-2	
Selenium	0.0094	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:55	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	301	mg/L	6.0	3.0	5		05/11/15 23:58	16887-00-6	
Fluoride	0.060	mg/L	0.050	0.0036	1		05/11/15 19:14	16984-48-8	
Nitrate as N	18.6	mg/L	0.50	0.25	5		05/11/15 23:58	14797-55-8	
Sulfate	333	mg/L	6.0	3.0	5		05/11/15 23:58	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:43	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	7.4	mg/L	0.25	0.087	50		05/12/15 11:25		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505123ABC	Lab ID:	10305759010	Collecte	d: 05/07/15	12:00	Received: 05/	11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Phosphorus	571	ug/L	250	12.9	1	05/14/15 15:58	05/19/15 10:27	7723-14-0	
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 03:54	7440-43-9	
Potassium	25.1	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 03:54	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	3020			
Arsenic	0.18	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 13:58	7440-38-2	
Selenium	0.16	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 13:58	7782-49-2	
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C						
Fluoride	0.86J	mg/L	1.0	0.051	1		05/17/15 13:12	16984-48-8	В
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	92.0	mg/L	1.2	0.60	1		05/11/15 19:29	16887-00-6	M1
Fluoride	0.98	mg/L	0.050	0.0036	1		05/11/15 19:29	16984-48-8	M1
Nitrate as N	2.8	mg/L	0.10	0.050	1		05/11/15 19:29	14797-55-8	M1
Sulfate	467	mg/L	6.0	3.0	5		05/14/15 06:38	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	3.7	mg/L	0.20	0.10	5		05/21/15 13:44	7664-41-7	M1
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.50	mg/L	0.025	0.0087	5		05/12/15 11:26		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505155	Lab ID:	10305759013	Collecte	d: 05/07/15	5 13:10	Received: 05/	11/15 09:05 Ma	atrix: Water			
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010					
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 04:22	7440-43-9			
Potassium	427	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 04:22	7440-09-7			
6020 MET ICPMS	Analytical	Analytical Method: EPA 6020 Preparation Method: EPA 3020									
Arsenic	0.098	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:12	7440-38-2			
Selenium	0.0064	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:12	7782-49-2			
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C								
Fluoride	0.22J	mg/L	1.0	0.051	1		05/17/15 13:31	16984-48-8	В		
300.0 IC Anions	Analytical	Method: EPA 3	0.00								
Chloride	167	mg/L	6.0	3.0	5		05/14/15 07:57	16887-00-6			
Fluoride	0.017J	mg/L	0.050	0.0036	1		05/11/15 20:14	16984-48-8			
Nitrate as N	6.8	mg/L	0.10	0.050	1		05/11/15 20:14				
Sulfate	223	mg/L	6.0	3.0	5		05/14/15 07:57	14808-79-8			
350.1 Ammonia	Analytical	Method: EPA 3	50.1								
Nitrogen, Ammonia	0.51	mg/L	0.040	0.020	1		05/21/15 11:47	7664-41-7			
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E								
Orthophosphate as P	14.3	mg/L	0.50	0.17	100		05/12/15 11:30		НЗ		



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505701	Lab ID:	10305759014	Collecte	d: 05/07/15	14:00	Received: 05/	11/15 09:05 Ma	atrix: Water			
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Metho	od: EPA	A 3010					
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 04:37	7440-43-9			
Potassium	ND	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 04:37	7440-09-7			
6020 MET ICPMS	Analytical	Analytical Method: EPA 6020 Preparation Method: EPA 3020									
Arsenic	0.00029J	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:15	7440-38-2			
Selenium	ND	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:15	7782-49-2			
300.0 IC Anions	Analytical Method: EPA 300.0										
Chloride	ND	mg/L	1.2	0.60	1		05/11/15 20:29	16887-00-6			
Fluoride	ND	mg/L	0.050	0.0036	1		05/11/15 20:29	16984-48-8			
Nitrate as N	ND	mg/L	0.10	0.050	1		05/11/15 20:29	14797-55-8			
Sulfate	ND	mg/L	1.2	0.60	1		05/11/15 20:29	14808-79-8			
350.1 Ammonia	Analytical	Method: EPA 3	50.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		05/21/15 11:48	7664-41-7			
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E								
Orthophosphate as P	0.017	mg/L	0.0050	0.0017	1		05/12/15 11:11		НЗ		



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505156	Lab ID:	10305759015	Collecte	d: 05/07/1	5 15:05	Received: 05/	11/15 09:05 Ma	atrix: Water			
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010					
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 04:41	7440-43-9			
Potassium	1160	mg/L	12.5	0.63	5	05/19/15 09:00	05/21/15 08:07	7440-09-7			
6020 MET ICPMS	Analytical	Analytical Method: EPA 6020 Preparation Method: EPA 3020									
Arsenic	0.14	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:18	7440-38-2			
Selenium	0.00059	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:18	7782-49-2			
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C								
Fluoride	0.23J	mg/L	1.0	0.051	1		05/17/15 13:34	16984-48-8	В		
300.0 IC Anions	Analytical	Method: EPA 3	0.00								
Chloride	317	mg/L	12.0	6.0	10		05/14/15 08:14	16887-00-6			
Fluoride	36.5	mg/L	2.5	0.18	50		05/14/15 09:34	16984-48-8			
Nitrate as N	ND	mg/L	0.10	0.050	1		05/11/15 20:44	14797-55-8			
Sulfate	226	mg/L	12.0	6.0	10		05/14/15 08:14	14808-79-8			
350.1 Ammonia	Analytical	Method: EPA 3	50.1								
Nitrogen, Ammonia	11.0	mg/L	0.040	0.020	1		05/21/15 11:48	7664-41-7			
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E								
Orthophosphate as P	139	mg/L	5.0	1.7	1000		05/12/15 11:32		НЗ		



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505157ABC	Lab ID:	10305759016	Collecte	d: 05/07/1	5 15:50	Received: 05/	/11/15 09:05 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 04:47	7440-43-9	
Potassium	303	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 04:47	7440-09-7	M1
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.095	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:30	7440-38-2	
Selenium	0.00032J	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:30	7782-49-2	
SM4500F-C Fluoride	Analytical	Method: SM 45	500F/C						
Fluoride	0.30J	mg/L	1.0	0.051	1		05/17/15 13:52	16984-48-8	В
300.0 IC Anions	Analytical	Method: EPA 3	800.0						
Chloride	228	mg/L	12.0	6.0	10		05/14/15 08:31	16887-00-6	
Fluoride	32.4	mg/L	2.5	0.18	50		05/14/15 09:56	16984-48-8	M6,R1
Nitrate as N	0.056J	mg/L	0.10	0.050	1		05/11/15 20:59	14797-55-8	M1
Sulfate	261	mg/L	12.0	6.0	10		05/14/15 08:31	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	350.1						
Nitrogen, Ammonia	2.5	mg/L	0.080	0.040	2		05/21/15 13:47	7664-41-7	M1
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	36.6	mg/L	2.5	0.87	500		05/12/15 11:34		НЗ



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505104	Lab ID:	10305759017	Collecte	d: 05/07/15	5 14:20	Received: 05/	/11/15 09:05 Ma	atrix: Water		
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010				
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 05:15	7440-43-9		
Potassium	209	mg/L	2.5	0.13	1	05/19/15 09:00	05/21/15 05:15	7440-09-7		
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020				
Arsenic	0.036	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:45	7440-38-2		
Selenium	0.0035	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:45	7782-49-2		
300.0 IC Anions	Analytical Method: EPA 300.0									
Chloride	115	mg/L	6.0	3.0	5		05/12/15 00:16	16887-00-6		
Fluoride	3.1	mg/L	0.25	0.018	5		05/12/15 00:16	16984-48-8		
Nitrate as N	21.5	mg/L	0.50	0.25	5		05/12/15 00:16	14797-55-8		
Sulfate	138	mg/L	6.0	3.0	5		05/12/15 00:16	14808-79-8		
350.1 Ammonia	Analytical	Method: EPA 3	350.1							
Nitrogen, Ammonia	3.3	mg/L	0.080	0.040	2		05/21/15 13:51	7664-41-7		
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E							
Orthophosphate as P	1.1	mg/L	0.050	0.017	10		05/12/15 11:31		НЗ	



Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Sample: 505601	Lab ID:	10305759020	Collecte	d: 05/07/1	5 15:30	Received: 05/	11/15 09:05 Ma	atrix: Water			
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010					
Cadmium	ND	mg/L	0.0030	0.00065	1	05/19/15 09:00	05/21/15 05:21	7440-43-9			
Potassium	1130	mg/L	12.5	0.63	5	05/19/15 09:00	05/21/15 08:12	7440-09-7			
6020 MET ICPMS	Analytical	Analytical Method: EPA 6020 Preparation Method: EPA 3020									
Arsenic	0.14	mg/L	0.00050	0.00011	1	05/18/15 07:41	05/19/15 14:48	7440-38-2			
Selenium	0.00072	mg/L	0.00050	0.00020	1	05/18/15 07:41	05/19/15 14:48	7782-49-2			
SM4500F-C Fluoride	Analytical Method: SM 4500F/C										
Fluoride	0.18J	mg/L	1.0	0.051	1		05/17/15 14:04	16984-48-8	В		
300.0 IC Anions	Analytical	Method: EPA 3	0.00								
Chloride	313	mg/L	12.0	6.0	10		05/14/15 09:19	16887-00-6			
Fluoride	37.2	mg/L	2.5	0.18	50		05/14/15 13:00	16984-48-8			
Nitrate as N	ND	mg/L	0.10	0.050	1		05/11/15 22:15	14797-55-8			
Sulfate	222	mg/L	12.0	6.0	10		05/14/15 09:19	14808-79-8			
350.1 Ammonia	Analytical	Method: EPA 3	50.1								
Nitrogen, Ammonia	10.9	mg/L	0.80	0.40	20		05/21/15 13:53	7664-41-7			
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E								
Orthophosphate as P	122	mg/L	5.0	1.7	1000		05/12/15 11:33		НЗ		



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

QC Batch: MPRP/5361 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 10305759009, 10305759010

METHOD BLANK: 208787 Matrix: Water

Associated Lab Samples: 10305759009, 10305759010

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Phosphorus ug/L ND 250 05/19/15 08:56

LABORATORY CONTROL SAMPLE: 208788

Date: 05/26/2015 03:20 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Phosphorus ug/L 5000 5040 101 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208789 208790

MS MSD 10305723011 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 5100 75-125 20 Phosphorus ug/L 25.9J 5000 5000 5130 101 102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 208791 208792

MS MSD 10305759010 MS MSD MS Spike Spike MSD % Rec Max Parameter **RPD** RPD Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Phosphorus ug/L 571 5000 5000 5770 5780 104 104 75-125 0 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

(406)254-7226



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

QC Batch: MPRP/54323 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

METHOD BLANK: 1962300 Matrix: Water

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

Reporting Blank Parameter Limit Qualifiers Units Result Analyzed Cadmium ND 0.0030 05/21/15 02:39 mg/L Potassium mg/L ND 05/21/15 02:39

LABORATORY CONTROL SAMPLE: 1962301 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium mg/L 0.94 94 86-108 Potassium mg/L 10 9.3 93 85-108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1963714 1963713 MS MSD 10305759010 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Cadmium ND 1 1 0.95 0.95 95 95 83-112 0 20 mg/L 20 Potassium mg/L 25.1 10 10 35.2 34.8 101 97 82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1963715 1963716 MS MSD 10305759016 MS MSD MS Spike Spike MSD % Rec Max Parameter Units Conc. Result % Rec % Rec Limits RPD RPD Result Conc. Result Qual Cadmium ND 0.96 0.94 96 94 83-112 2 20 mg/L 1 1 303 103 69 Potassium 10 10 314 310 82-118 20 M1 mg/L 1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

(406)254-7226



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

Selenium

Date: 05/26/2015 03:20 PM

QC Batch: MPRP/54322 Analysis Method: EPA 6020
QC Batch Method: EPA 3020 Analysis Description: 6020 MET

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

METHOD BLANK: 1962296 Matrix: Water

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

Reporting Blank Parameter Qualifiers Units Result Limit Analyzed Arsenic ND 0.00050 05/19/15 13:20 mg/L 0.00050 Selenium mg/L ND 05/19/15 13:20

LABORATORY CONTROL SAMPLE: 1962297 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Arsenic mg/L .08 0.078 98 92-110

.08

Arsenic mg/L .08 0.078 98 92-110
Selenium mg/L .08 0.083 104 93-112

0.00032J

mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1963709 1963710 MS MSD 10305759010 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Arsenic 0.18 .08 .08 0.25 0.25 93 99 89-114 2 20 mg/L Selenium 20 mg/L 0.16 .08 .08 0.25 0.25 108 110 85-117

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1963711 1963712 MS MSD 10305759016 MS MS % Rec Spike Spike MSD MSD Max Parameter Units Result % Rec RPD RPD Result Conc. Conc. Result % Rec Limits Qual 0.095 .08 .08 0.17 0.17 98 97 89-114 0 20 Arsenic mg/L

.08

0.083

0.082

103

103

85-117

20

1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

QC Batch: WET/41829 Analysis Method: SM 4500F/C

QC Batch Method: SM 4500F/C Analysis Description: SM4500F-C Fluoride

Associated Lab Samples: 10305759001, 10305759010, 10305759013, 10305759015, 10305759016, 10305759020

METHOD BLANK: 1968130 Matrix: Water

Associated Lab Samples: 10305759001, 10305759010, 10305759013, 10305759015, 10305759016, 10305759020

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Fluoride mg/L 0.14J 1.0 05/17/15 12:47

LABORATORY CONTROL SAMPLE: 1968131

Date: 05/26/2015 03:20 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Fluoride mg/L 5.1 102 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968132 1968133

MS MSD 10305759010 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Fluoride mg/L 5 5 80-120 20 0.86J 6.0 6.2 103 107 3

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968134 1968135

MS MSD 10305759016 MS MSD MS Spike Spike MSD % Rec Max Limits RPD Qual Parameter Units Result Conc. Conc. Result Result % Rec % Rec RPD Fluoride 0.30J 5 5 5.4 5.5 102 104 80-120 2 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

(406)254-7226



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

QC Batch: WETA/22789 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

METHOD BLANK: 1961702 Matrix: Water

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Chloride	mg/L	ND ND	1.2	05/11/15 18:13	
Fluoride	mg/L	ND	0.050	05/11/15 18:13	
Nitrate as N	mg/L	ND	0.10	05/11/15 18:13	
Sulfate	mg/L	ND	1.2	05/11/15 18:13	

LABORATORY CONTROL SAMPLE:	1961703	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	12.5	12.4	99	90-110	
Fluoride	mg/L	1	0.98	98	90-110	
Nitrate as N	mg/L	1	0.92	92	90-110	
Sulfate	mg/L	12.5	11.9	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1961704 1961705												
			MS	MSD								
		10305759010	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	92.0	12.5	12.5	92.7	93.3	5	10	90-110	1	20	M1
Fluoride	mg/L	0.98	1	1	1.8	1.8	81	81	90-110	0	20	M1
Nitrate as N	mg/L	2.8	1	1	3.5	3.5	67	69	90-110	1	20	M1
Sulfate	mg/L	467	62.5	62.5	529	529	98	99	90-110	0	20	E

MATRIX SPIKE & MATRIX SP	IKE DUPLIC	ATE: 19617	06		1961707							
Barawatan		10305759016	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	DDD	Max	Overl
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	228	125	125	359	360	105	106	90-110	0	20	
Fluoride	mg/L	32.4	10	10	18.1	24.7	-143	-77	90-110	31	20	M6,R1
Nitrate as N	mg/L	0.056J	1	1	0.96	0.94	90	88	90-110	2	20	M1
Sulfate	mg/L	261	125	125	399	399	110	110	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

(406)254-7226



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

QC Batch: WETA/22962 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

METHOD BLANK: 1971725 Matrix: Water

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

ParameterUnitsBlank Reporting ResultReporting LimitAnalyzedQualifiersNitrogen, Ammoniamg/LND0.04005/21/15 11:32

LABORATORY CONTROL SAMPLE: 1971726

Date: 05/26/2015 03:20 PM

LCS LCS % Rec Spike Parameter Units Conc. Result % Rec Limits Qualifiers Nitrogen, Ammonia mg/L 1 1.1 108 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971727 1971728

MS MSD 10305759010 MSD MS MSD Spike Spike MS % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Nitrogen, Ammonia 4.6 114 90-110 20 M1 mg/L 3.7 1 1 4.8 96

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971729 1971730

MS MSD 10305759016 MS MS MSD Spike Spike MSD % Rec Max Limits Parameter Units % Rec RPD RPD Qual Result Conc. Conc. Result Result % Rec Nitrogen, Ammonia mg/L 2.5 1 1 3.6 3.6 113 117 90-110 20 M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

(406)254-7226



QUALITY CONTROL DATA

Project: FMC RCRA
Pace Project No.: 10305759

Orthophosphate as P

Date: 05/26/2015 03:20 PM

QC Batch: WETA/22788 Analysis Method: SM 4500-P E

QC Batch Method: SM 4500-P E Analysis Description: SM4500P-E, Phosphate, Ortho

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

10305759017, 10305759020

METHOD BLANK: 1961687 Matrix: Water

Associated Lab Samples: 10305759001, 10305759002, 10305759003, 10305759004, 10305759005, 10305759006, 10305759007,

10305759008, 10305759009, 10305759010, 10305759013, 10305759014, 10305759015, 10305759016,

0.0050

05/12/15 11:20

10305759017, 10305759020

mg/L

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

ND

LABORATORY CONTROL SAMPLE: 1961688

LCS LCS % Rec Spike Parameter Units Conc. Result % Rec Limits Qualifiers Orthophosphate as P mg/L .1 0.096 96 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1961689 1961690

MS MSD 10305759010 MSD MS MSD Spike Spike MS % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Orthophosphate as P 0.50 .5 1.0 102 103 80-120 30 H3 mg/L .5 1.0 0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1961691 1961692

MS MSD 10305759016 MS MS Spike Spike MSD MSD % Rec Max Parameter Units % Rec Limits RPD RPD Qual Result Conc. Conc. Result Result % Rec Orthophosphate as P mg/L 36.6 50 50 89.0 89.5 105 106 80-120 30 H3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: FMC RCRA
Pace Project No.: 10305759

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis
PASI-V Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

Date: 05/26/2015 03:20 PM

B Analyte was detected in the associated method blank.

E Analyte concentration exceeded the calibration range. The reported result is estimated.
 H3 Sample was received or analysis requested beyond the recognized method holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10305759001	 505115	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
10305759002	505113	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
10305759003	505166	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759004	505168	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759005	505165	EPA 3010	MPRP/54323		ICP/23814
0305759006	505167	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759007	505183	EPA 3010	MPRP/54323		ICP/23814
0305759008	505158	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
10305759009	505122	EPA 3010	MPRP/5361	EPA 6010	ICP/4267
10305759009	505122	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
10305759010	505123ABC	EPA 3010	MPRP/5361	EPA 6010	ICP/4267
10305759010	505123ABC	EPA 3010	MPRP/54323		ICP/23814
0305759013	505155	EPA 3010	MPRP/54323		ICP/23814
0305759014	505701	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759015	505156	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759016	505157ABC	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759017	505104	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759020	505601	EPA 3010	MPRP/54323	EPA 6010	ICP/23814
0305759001	505115	EPA 3020	MPRP/54322		ICPM/2433
0305759002	505113	EPA 3020	MPRP/54322		ICPM/2433
0305759003	505166	EPA 3020	MPRP/54322		ICPM/2433
0305759004	505168	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759005	505165	EPA 3020	MPRP/54322		ICPM/2433
0305759006	505167	EPA 3020	MPRP/54322		ICPM/2433
0305759007	505183	EPA 3020	MPRP/54322		ICPM/2433
0305759008	505158	EPA 3020	MPRP/54322		ICPM/2433
0305759009	505122	EPA 3020	MPRP/54322		ICPM/2433
0305759010	505123ABC	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759013	505155	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759014	505701	EPA 3020	MPRP/54322		ICPM/2433
0305759015	505156	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759016	505157ABC	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759017	505104	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759020	505601	EPA 3020	MPRP/54322	EPA 6020	ICPM/2433
0305759001	505115	SM 4500F/C	WET/41829		
0305759010	505123ABC	SM 4500F/C	WET/41829		
0305759013	505155	SM 4500F/C	WET/41829		
0305759015	505156	SM 4500F/C	WET/41829		
0305759016	505157ABC	SM 4500F/C	WET/41829		
0305759020	505601	SM 4500F/C	WET/41829		
0305759001	505115	EPA 300.0	WETA/22789		
0305759002	505113	EPA 300.0	WETA/22789		
0305759003	505166	EPA 300.0	WETA/22789		
0305759004	505168	EPA 300.0	WETA/22789		
10305759005	505165	EPA 300.0	WETA/22789		



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC RCRA
Pace Project No.: 10305759

Date: 05/26/2015 03:20 PM

_ab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
10305759006		EPA 300.0	WETA/22789	-	
10305759007	505183	EPA 300.0	WETA/22789		
0305759008	505158	EPA 300.0	WETA/22789		
0305759009	505122	EPA 300.0	WETA/22789		
0305759010	505123ABC	EPA 300.0	WETA/22789		
0305759013	505155	EPA 300.0	WETA/22789		
0305759014	505701	EPA 300.0	WETA/22789		
0305759015	505156	EPA 300.0	WETA/22789		
0305759016	505157ABC	EPA 300.0	WETA/22789		
0305759017	505104	EPA 300.0	WETA/22789		
0305759020	505601	EPA 300.0	WETA/22789		
0305759001	505115	EPA 350.1	WETA/22962		
0305759002	505113	EPA 350.1	WETA/22962		
0305759003	505166	EPA 350.1	WETA/22962		
0305759004	505168	EPA 350.1	WETA/22962		
0305759005	505165	EPA 350.1	WETA/22962		
0305759006	505167	EPA 350.1	WETA/22962		
0305759007	505183	EPA 350.1	WETA/22962		
0305759008	505158	EPA 350.1	WETA/22962		
0305759009	505122	EPA 350.1	WETA/22962		
0305759010	505123ABC	EPA 350.1	WETA/22962		
0305759013	505155	EPA 350.1	WETA/22962		
0305759014	505701	EPA 350.1	WETA/22962		
0305759015	505156	EPA 350.1	WETA/22962		
0305759016	505157ABC	EPA 350.1	WETA/22962		
0305759017	505104	EPA 350.1	WETA/22962		
0305759020	505601	EPA 350.1	WETA/22962		
0305759001	505115	SM 4500-P E	WETA/22788		
0305759002	505113	SM 4500-P E	WETA/22788		
0305759003	505166	SM 4500-P E	WETA/22788		
0305759004	505168	SM 4500-P E	WETA/22788		
0305759005	505165	SM 4500-P E	WETA/22788		
0305759006	505167	SM 4500-P E	WETA/22788		
0305759007	505183	SM 4500-P E	WETA/22788		
0305759008	505158	SM 4500-P E	WETA/22788		
0305759009	505122	SM 4500-P E	WETA/22788		
0305759010	505123ABC	SM 4500-P E	WETA/22788		
0305759013	505155	SM 4500-P E	WETA/22788		
0305759014	505701	SM 4500-P E	WETA/22788		
0305759015	505156	SM 4500-P E	WETA/22788		
0305759016	505157ABC	SM 4500-P E	WETA/22788		
0305759017	505104	SM 4500-P E	WETA/22788		
0305759020	505601	SM 4500-P E	WETA/22788		



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

s must be completed accurately.	Commence of the commence of th	100000000000000000000000000000000000000		REGULATORY AGENCY	PO BOX 4111 POCATELLO ID 83202 NPDES GROUND WATER DRINKING WATER	L UST F RCRA	Site Location	STATE:	Requested Analysis Filtered (Y/N)
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.	Section C	Invoice Information:	Attention: Brian McGinnis	Company Name: FMC	Address: PO BOX 4111 POCA	Pace Quote Reference:	Pace Project Kabor Xiong	Pace Profile #:	
The Chain-of-C	Section B	Required Project Information:	Report To: Ericka Vallance, Hydrometrics	Copy To: Rob Hartman, MWH	Bruce Wallin, ECCI	Purchase Order No.:	Project Name: FMC	Project Number RCRA CERCLA-CALCINER	
FACE PRAIVILEAL www.paceabs.com	Section A	Dient Information:	Company: FMC	Address: PO BOX 4111	POCATELLO, ID 83202	Email To: brian.mcginnis@fmc.com	Fax:	Requested Due Date/TAT:	

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SAMPLER NAME AND SIGNATURE SAMPLER NAME AND SIGNATURE SIGNATURE of SAMPLER: Manual Cooler (YM) SAMPLER NAME AND SIGNATURE SAMPLER NAME AND SIGNATURE (MANUAL NAME OF SAMPLER: Manual Name of SAM	300.0		S	4		Hydro	Š	11/15	<u> </u>	17.	-		Z.	N	7	K	di	4		W	3	100					
I Phos sub to Pace-VM by 6010 only on wells 108, 127, 122 & SAMPLER NAME AND SIGNATURE SAMPLER NAME AND SIGNATURE SAMPLER NAME OF SAMPLER: (MM/DD/Y): 65 15 15 15 15 15 15 15	6010: 0	Cadmium, Potassium; 6020; Arsenic, Selenium				-					3							7	T.	2	9	Z	S	1	>	7	
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: No Hey COWE SIGNATURE of SAMPLER: No Hey COWE (MM/DD/YY): COOK COOK COOK COOK COOK COOK COOK COO	Total P 123	Phos sub to Pace-VM by 6010 only on wells 108, 121, 122 &							-														9	*	. 7		
PRINT Name of SAMPLER: Not Head (MM/DD/YY): OS 15 15 15 15 15 15 15 1				Mercelonia		SAMPL	ER NAME AN	ID SIGNATU	- B	Herman Comment						The second secon	mountain country of the last			orest production of the contract of the contra						joe	
SIGNATURE of SAMPLER: Na HECKAR (MM/DD/YY): CS //S F OF O	Page	Dogg					PRINT Name	of SAMPLEF	3:	ľ	15	Hex	M	13	16	CANADA MANAGA MA		Management of the Control of the Con	,	accurate produce and a		T	, ui di				مستونس يبري
	e 40 (0.40					SIGNATURE	of SAMPLE	نڼا	Z	H	4	13		AG W	ATE SIG	ned 'Y):	8	-		S		TeT				

Page 40 of 44

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

THE TOTAL STREET AND TOTAL STREET

Face Analytical

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

3 <u>_</u> Pace Project No./ Lab I.D. (N/A) Samples Intact **DRINKING WATER** 1928816988508 Fed Ex Air Bill # SAMPLE CONDITIONS Cooler (Y/V) OTHER Custody Sealed οţ Ice (Y/V) Received on GROUND WATER Residual Chlorine (Y/N) O° ni qmeT REGULATORY AGENCY 0 RCRA TIME Requested Analysis Filtered (Y/N) は十二日 3 STATE: Site Location NPDES DATE Ortho Phosphorus LSJ sinommA SUROHRSOHR JATOT PO BOX 4111 POCATELLO ID 83202 FLUORIDE (ISE) N ACCEPTED BY / AFFILIATION TOTAL METALS 6010 **COTAL METALS 6020** 300'01C ** JaeT sisylsnA J ÎN/A Other Methanol ation: Brian McGinnis Preservatives Na₂S₂O₃ Kabor Xiong HOBN Company Name: FMC HCI FONH 9, PS2H Pace Quote Reference: Pace Project Manager: Pace Profile #: Section C nvoice Infor N Unpreserved N M Address: w viv. 10 S MM J # OF CONTAINERS SAMPLER NAME AND SIGNATURE Ñ SAMPLE TEMP AT COLLECTION DATE 7.20 001 N. 1505 1550 9-1200 220 255 TIME n COMPOSITE END/GRAB 578 Nalter Crowe / Hydrometrics DATE COLLECTED RCRA CERCLA-CALCINER Report To: Ericka Vallance, Hydrometrics RELINQUISHED BY / AFFILIATION TIME COMPOSITE Sopy To: Rob Hartman, MWH Bruce Wallin, ECCI DATE Required Project Information: FMC (G=GRAB C=COMP) SAMPLE TYPE ပ O O ഗ ഗ ტ ტ O ტ ග Ø ഗ urchase Order No.: ¥ Š Ŋ Š ķ 3 ₹ × Ŋ Ş Š Š Project Number **MATRIX CODE** roject Name: Section B Valid Matrix Codes

MATRIX
CODE

DERIVATION ON WATER
WASTE WATER
WASTE WATER
SOLLSOLID
OIL
WIPE
AR
OTHER
TISSUE
TISSUE
TISSUE 122 & Total Phos sub to Pace-VM by 6010 only on wells 108, 121, 505 IS7B 505 157C 505 156 505 157 505 (23C 505 OH 505 70 505 jSS 505 **60** 3010 Cadmium, Potassium; 6020; Arsenic, Selenium brian.mcginnis@fmc.com ADDITIONAL COMMENTS 505 505 POCATELLO, ID 83202 (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE SAMPLED Fax: Section D Required Client Information PO BOX 4111 Section A Required Client Information: Requested Due Date/TAT: 300.0- Cl, SO4, Nitrate, F FMC company: Email To: ddress: Phone: 10 2 HEM# N 67 un 9 Ν. œ တ -

Page 41 of 44

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

F-ALL-Q-020rev.08, 12-Oct-2067

10/50

DATE Signed (MINIDD/YY):

500

S

SIGNATURE of SAMPLER: PRINT Name of SAMPLER:

Pace Analytical

Project Manager Review:

hold, incorrect preservative, out of temp, incorrect containers).

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.13

Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority:
Pace Minnesota Quality Office

Sample Condition Client Name: Project #: WO#:10305759 Upon Receipt Courier: Fed Ex TUPS USPS Client Commercial]Pace Other: SpeeDee Tracking Number: Proj. Name: Optional: Proj. Due Date: Custody Seal on Cooler/Box Present? No No Seals Intact? Yes Packing Material: Bubble Wrap None Temp Blank? Bubble Bags Thermometer B88A9130516413 B88A912167504 Blue None Samples on ice, cooling process has begun Type of Ice: □Wet Used: ₽88A0143310098 Cooler Temp Read (°C): 4.5.5.5 Cooler Temp Corrected (°C): Biological Tissue Frozen? Temp should be above freezing to 6°C Correction Factor: Date and Initials of Person Examining Contents: USDA Regulated Soil (N/A, water sample) Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. Did samples originate from a foreign source (internationally, MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? Yes □No including Hawaii and Puerto Rico)? If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork. COMMENTS: Chain of Custody Present? **■**Yes □No □N/A 1. Chain of Custody Filled Out? Flyes □No □N/A 2. Chain of Custody Relinquished? 3. □No □N/A Sampler Name and/or Signature on COC? □N/A 4. Samples Arrived within Hold Time? □N/A 5. Short Hold Time Analysis (<72 hr)? □N/A 6. Rush Turn Around Time Requested? Yes H10 □N/A 7. Sufficient Volume? Yes No □N/A Correct Containers Used? 9. Yes □No □N/A -Pace Containers Used? Yes No □N/A Containers Intact? ¥es~ □No □N/A 10. Filtered Volume Received for Dissolved Tests? N/A Note if sediment is visible in the dissolved container Yes □No 11. Sample Labels Match COC? 12. Yes □No □N/A -Includes Date/Time/ID/Analysis Matrix: All containers needing acid/base preservation have been HCI checked? □N/A □No All containers needing preservation are found to be in compliance with EPA recommendation? (HNO₃, H₂SO₄, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) I not in compi Yes No □N/A Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC DN/A Yes completed: Headspace in VOA Vials (>6mm)? N/A 14. Yes No Trip Blank Present? Yes No N/A 15. Trip Blank Custody Seals Present? Yes No DAVA Pace Trip Blank Lot # (if purchased): CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No Person Contacted: Date/Time: Comments/Resolution:

MAS

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of

Page 42 of 44

12,2015

Date: MANY

W0#:1246918

PM HRZ CLIENT PACE MPLS

Due Date: 05/28/15

43 of

- or mayaca www.pacelabs.com

Workorder: 10305759 Workorder Name: FMC RCRA Owner Received Date: 5/11/2015 Results Requested By: 5/26/2015

Samples Intact (y or N	N 6r N	Received on Ice	Re	Y/or N	Custody Seal 🔿	°C Cus	. 4	Cooler Temperature on Receipt	Cooler
)		1.10			-		, ,	- -	ယ
	Z	13/517		1	2120212	5/12/15	7	Work (1	2
		5/1/2/15 15	100	1	Je J	Shilk		Xxxx Xxxx	-
14 bata pty wedled-due 6/1/15	14 8	Date/Time		Ÿ	Received By	Date/Time		Released By	Transfers
The second secon									
									Ċħ
									4
									ω
010		<u> </u>	ಖ	Water	10305759010	5/7/2015 12:00	RQS	505123ABC	2 50
200		<u>X</u>	7	Water	10305759009	5/7/2015 11:05	PS	505122	1 50
LAB USE ONLY		T. phos by Golo	HNO3	a MN	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042	Pace / 315 Ct Virginia Phone	Turk to the second seco	Kabor Xiong Pace Analytical Services, Inc. 1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Fax (612)607-6444 Sample ID	Kabor Xion Pace Analy 1700 Elm s Minneapoli Phone (61 2)6 Fax (61 2)6

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical*

hold, incorrect preservative, out of temp, incorrect containers)

Document Name: Sample Condition Upon Receipt Form

Document No.: F-VM-C-001-Rev.09 Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority:

Pace Virginla, Minnesota Quality Office

Sample Condition Upon Receipt Client Name:	NIV	·	Project	# W0#:1246918
Courier: Fed Ex UPS	USPS	_	Client	
Commercial \(\superstyle{\superstyle{\superstyle{\limits}}}\) Pace	Other			1246918
Custody Seal on Cooler/Box Present?	No	Seals	intact?	Yes No Optional: Proj. Due Date: Proj. Name:
Packing Material: UBubble Wrap \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Bags □N	one	Other:_	Temp Blank? Yes No
Thermometer Used: 🔽 140792808	Type of	Ice:]Wet [Blue None Samples on ice, cooling process has begun
Cooler Temp Read °C: 1,9 Cooler Temp Temp should be above freezing to 6°C Correction Fa	Corrected of sector:	c: <u>2 </u>	Date an	Biological Tissue Frozen? Yes No NA d Initials of Person Examining Contents: 1/3/15
Chain of Custody Present?	\ □ Yes	□No	□N/A	1.
Chain of Custody Filled Out?	∑di⊅es	□No	□N/A	2.
Chain of Custody Relinquished?		□No	□N/A	3.
Sampler Name and Signature on COC?	Yes	□No	S	4.
Samples Arrived within Hold Time?	Yes	□No	N/a	5.
Short Hold Time Analysis (<72 hr)?	Yes)ZINO	□N/A	6.
Rush Turn Around Time Requested?	□Yes		□N/A	7.
Sufficient Volume?	√2\Y9s	□No	□N/A	8.
Correct Containers Used?	∑¥æs	□No	□N/A	9.
-Pace Containers Used?	∑®es	□No	□n/a	
Containers Intact?	Xes	□No	□n/a	10.
Filtered Volume Received for Dissolved Tests?	Yes	□No	y⊒ny/a	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	Q _{Yes}	□No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix: 5	<u> </u>			
All containers needing acid/base preservation will be checked and documented in the pH logbook.	7	□No	□N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	Yes	□No	107 A	13.
Headspace in VOA Vials (>6mm)?	Yes	□No	DAN/A	14.
Trip Blank Present?	Yes	□No	^ZDS/A	15.
Trip Blank Custody Seals Present?	Yes	□No	JAN/A	
Pace Trip Blank Lot # (if purchased): CLIENT NOTIFICATION/RESOLUTION Person Contacted: Comments/Resolution:				Field Data Required? Yes No
FECAL WAIVER ON FILE Y N	20	-		RE WAIVER ON FILE Y N
Project Manager Review: Whenever there is a discrepancy affecting North Carolin Nort	na compliance	samples,	a copy of th	Date: 5/14/15 is form will be sent to the North Carolina DEHNR Certification Office (i.e. out of





July 14, 2015

Ericka Vallance Hydrometrics 3020 Bozeman Ave Helena, MT 59601

RE: Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Dear Ericka Vallance:

Enclosed are the analytical results for sample(s) received by the laboratory on June 27, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised on July 14, 2015 to correct Metals (6010) units from ug/L to mg/L.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kabor Xiong

kabor.xiong@pacelabs.com

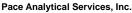
Kalon Xiong

Project Manager

Enclosures

cc: Rob Hartman, MWH Americas, Inc. Bradly Maddock, FMC Carrie Ross, FMC Bruce Wallin, ECCI





150 N Ninth Street Billings, MT 59101 (406)254-7226



CERTIFICATIONS

Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01 Alaska Certification #: UST-078 Alaska Certification #MN00064 Alabama Certification #40770 Arizona Certification #: AZ-0014 Arkansas Certification #: 88-0680 California Certification #: 01155CA Colorado Certification #Pace Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L Florida/NELAP Certification #: E87605

Guam Certification #:14-008r Georgia Certification #: 959 Georgia EPD #: Pace

Idaho Certification #: MN00064 Hawaii Certification #MN00064 Illinois Certification #: 200011 Indiana Certification#C-MN-01 Iowa Certification #: 368

Kansas Certification #: E-10167 Kentucky Dept of Envi. Protection - DW #90062 Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086 Louisiana DHH #: LA140001 Maine Certification #: 2013011

Maryland Certification #: 322 Michigan DEPH Certification #: 9909

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792 Alaska Certification #: UST-078 Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace Montana Certification #: MT0092 Nevada Certification #: MN_00064 Nebraska Certification #: Pace New Jersey Certification #: MN-002 New York Certification #: 11647 North Carolina Certification #: 530

North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Certification #: MN200001 Oregon Certification #: MN300001 Pennsylvania Certification #: 68-00563

Puerto Rico Certification Saipan (CNMI) #:MP0003 South Carolina #:74003001 Texas Certification #: T104704192 Tennessee Certification #: 02818 Utah Certification #: MN000642013-4 Virginia DGS Certification #: 251 Virginia/VELAP Certification #: Pace Washington Certification #: C486 West Virginia Certification #: 382 West Virginia DHHR #:9952C

Wisconsin Certification #: 999407970

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification #: 998027470 WA Department of Ecology Lab ID# C1007





SAMPLE SUMMARY

Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
10312267001	505121A	Water	06/26/15 09:05	06/27/15 09:15	
10312267002	505604	Water	06/26/15 09:30	06/27/15 09:15	
10312267003	505108A(ABC)	Water	06/26/15 10:05	06/27/15 09:15	
10312267006	5051704	Water	06/26/15 10:30	06/27/15 09:15	



SAMPLE ANALYTE COUNT

Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

₋ab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
0312267001	505121A	EPA 6010	DM, WBS	2	PASI-M
		EPA 6010C	MAR	1	PASI-V
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0312267002	505604	EPA 6010	DM, WBS	2	PASI-M
		EPA 6010C	MAR	1	PASI-V
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0312267003	505108A(ABC)	EPA 6010	DM, WBS	2	PASI-M
		EPA 6010C	MAR	1	PASI-V
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M
0312267006	5051704	EPA 6010	WBS	2	PASI-M
		EPA 6010C	MAR	1	PASI-V
		EPA 6020	RAG	2	PASI-M
		EPA 300.0	KEO	4	PASI-M
		EPA 350.1	PH1	1	PASI-M
		SM 4500-P E	PH1	1	PASI-M





Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: EPA 6010
Description: 6010 MET ICP

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: EPA 6010C

Description: 6010C MET ICP

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: EPA 6020

Description: 6020 MET ICPMS

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3020 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: EPA 300.0

Description: 300.0 IC Anions

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/23586

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10312024001,10312267003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2008732)
 - Fluoride
- MSD (Lab ID: 2008733)
 - Fluoride

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 2008732)
 - Chloride
 - Nitrate as N
 - Sulfate
- MSD (Lab ID: 2008733)
 - Chloride
 - Nitrate as N
 - Sulfate

Additional Comments:





Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: EPA 350.1

Description: 350.1 Ammonia

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.





Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Method: SM 4500-P E

Description: Phosphate, Ortho Low Level

Client: FMC

Date: July 14, 2015

General Information:

4 samples were analyzed for SM 4500-P E. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Sample: 505121A	Lab ID:	10312267001	Collecte	d: 06/26/15	09:05	Received: 06/	27/15 09:15 M	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical	Method: EPA 6	010C Prep	paration Met	hod: EF	PA 3010			
Phosphorus	0.72	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 09:17	7723-14-0	
Cadmium	ND	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 18:38	7440-43-9	
Potassium	56.2	mg/L	12.5	0.63	5	06/30/15 12:26	07/01/15 10:05	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	A 3020			
Arsenic	0.0089	mg/L	0.00050	0.00011	1	07/02/15 14:33	07/07/15 12:29	7440-38-2	
Selenium	0.014	mg/L	0.00050	0.00020	1	07/02/15 14:33	07/07/15 12:29	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	482	mg/L	12.0	6.0	10		06/28/15 01:37	16887-00-6	
Fluoride	0.18	mg/L	0.050	0.0036	1		06/27/15 14:57	16984-48-8	
Nitrate as N	19.2	mg/L	1.0	0.50	10		06/28/15 01:37	14797-55-8	
Sulfate	383	mg/L	12.0	6.0	10		06/28/15 01:37	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.049	mg/L	0.040	0.020	1		07/07/15 11:33	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.70	mg/L	0.025	0.0087	5		06/27/15 15:10		



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Sample: 505604	Lab ID:	10312267002	Collected	d: 06/26/15	09:30	Received: 06/	27/15 09:15 M	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical	Method: EPA 6	010C Prep	aration Met	hod: EF	PA 3010			
Phosphorus	0.71	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 08:55	7723-14-0	
Cadmium	ND	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 18:41	7440-43-9	
Potassium	55.8	mg/L	12.5	0.63	5	06/30/15 12:26	07/01/15 10:08	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Metho	od: EPA	A 3020			
Arsenic	0.0092	mg/L	0.00050	0.00011	1	07/02/15 14:33	07/07/15 12:32	7440-38-2	
Selenium	0.015	mg/L	0.00050	0.00020	1	07/02/15 14:33	07/07/15 12:32	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	480	mg/L	12.0	6.0	10		06/28/15 01:55	16887-00-6	
Fluoride	0.20	mg/L	0.050	0.0036	1		06/27/15 15:12	16984-48-8	
Nitrate as N	19.3	mg/L	1.0	0.50	10		06/28/15 01:55	14797-55-8	
Sulfate	381	mg/L	12.0	6.0	10		06/28/15 01:55	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		07/07/15 11:34	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.64	mg/L	0.025	0.0087	5		06/27/15 15:11		



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Sample: 505108A(ABC)	Lab ID:	10312267003	Collecte	d: 06/26/15	10:05	Received: 06/	27/15 09:15 Ma	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical	Method: EPA 6	010C Prep	aration Met	hod: EF	PA 3010			
Phosphorus	0.50	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 08:58	7723-14-0	
Cadmium	ND	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 18:45	7440-43-9	
Potassium	123	mg/L	12.5	0.63	5	06/30/15 12:26	07/01/15 10:11	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	0.018	mg/L	0.00050	0.00011	1	07/06/15 05:36	07/07/15 08:58	7440-38-2	
Selenium	0.015	mg/L	0.00050	0.00020	1	07/06/15 05:36	07/07/15 08:58	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	424	mg/L	12.0	6.0	10		06/28/15 02:12	16887-00-6	M6
Fluoride	0.52	mg/L	0.050	0.0036	1		06/27/15 15:28	16984-48-8	M1
Nitrate as N	17.8	mg/L	1.0	0.50	10		06/28/15 02:12	14797-55-8	M6
Sulfate	350	mg/L	12.0	6.0	10		06/28/15 02:12	14808-79-8	M6
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	0.020J	mg/L	0.040	0.020	1		07/07/15 11:34	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	0.44	mg/L	0.025	0.0087	5		06/27/15 15:13		



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Sample: 5051704	Lab ID:	10312267006	Collecte	d: 06/26/1	5 10:30	Received: 06/	27/15 09:15 M	atrix: Water	
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical	Method: EPA 6	010C Prep	paration Met	hod: EF	PA 3010			
Phosphorus	ND	mg/L	0.10	0.013	1	07/08/15 09:59	07/09/15 09:14	7723-14-0	
Cadmium	ND	mg/L	0.0030	0.00065	1	06/30/15 12:26	06/30/15 19:00	7440-43-9	
Potassium	ND	mg/L	2.5	0.13	1	06/30/15 12:26	06/30/15 19:00	7440-09-7	
6020 MET ICPMS	Analytical	Method: EPA 6	020 Prepa	ration Meth	od: EPA	3020			
Arsenic	ND	mg/L	0.00050	0.00011	1	07/06/15 05:36	07/07/15 09:17	7440-38-2	
Selenium	ND	mg/L	0.00050	0.00020	1	07/06/15 05:36	07/07/15 09:17	7782-49-2	
300.0 IC Anions	Analytical	Method: EPA 3	0.00						
Chloride	ND	mg/L	1.2	0.60	1		06/27/15 16:43	16887-00-6	
Fluoride	0.0070J	mg/L	0.050	0.0036	1		06/27/15 16:43	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		06/27/15 16:43	14797-55-8	
Sulfate	ND	mg/L	1.2	0.60	1		06/27/15 16:43	14808-79-8	
350.1 Ammonia	Analytical	Method: EPA 3	50.1						
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		07/07/15 11:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical	Method: SM 45	500-P E						
Orthophosphate as P	ND	mg/L	0.0050	0.0017	1		06/27/15 15:02		



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

QC Batch: MPRP/5532 Analysis Method: EPA 6010C QC Batch Method: EPA 3010 Analysis Description: 6010C MET

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

METHOD BLANK: 226008 Matrix: Water
Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Phosphorus mg/L ND 0.10 07/09/15 08:49

LABORATORY CONTROL SAMPLE: 226009

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers 5.2 Phosphorus mg/L 104 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 226010 226011

MS MSD 10312267003 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Phosphorus 0.50 5 5 5.8 75-125 0 20 mg/L 5.8 106 106

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Qualifiers



QUALITY CONTROL DATA

Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

QC Batch: MPRP/55677 Analysis Method: EPA 6010 QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

METHOD BLANK: 2010445 Matrix: Water Associated Lab Samples:

10312267001, 10312267002, 10312267003, 10312267006

Blank Reporting Parameter Result Limit Units Analyzed

Cadmium ND 0.0030 06/30/15 18:23 mg/L Potassium mg/L ND 2.5 06/30/15 18:23

LABORATORY CONTROL SAMPLE: 2010446

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium mg/L 0.96 96 86-108 Potassium mg/L 10 9.1 91 85-108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2010593 2010594

			IVIS	เพอบ								
		10312267003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium	mg/L	ND	1	1	0.98	0.97	98	97	83-112	1	20	
Potassium	mg/L	123	10	10	133	134	105	109	82-118	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

QC Batch: MPRP/55767 Analysis Method: EPA 6020
QC Batch Method: EPA 3020 Analysis Description: 6020 MET

Associated Lab Samples: 10312267001, 10312267002

METHOD BLANK: 2012882 Matrix: Water

Associated Lab Samples: 10312267001, 10312267002

ParameterUnitsBlank ResultReporting LimitAnalyzedQualifiersArsenicmg/LND0.0005007/07/15 11:02

Selenium mg/L ND 0.00050 07/07/15 11:02

LABORATORY CONTROL SAMPLE: 2012883

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Arsenic .08 0.083 103 92-110 mg/L Selenium mg/L .08 0.083 104 93-112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2012884 2012885 MSD MS 10312267002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Arsenic mg/L 0.0092 .08 .08 0.094 0.094 106 107 89-114 0 20 Selenium mg/L 0.015 .08 .08 0.097 0.096 103 102 85-117 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

QC Batch: MPRP/55768 Analysis Method: EPA 6020
QC Batch Method: EPA 3020 Analysis Description: 6020 MET

Associated Lab Samples: 10312267003, 10312267006

METHOD BLANK: 2012886 Matrix: Water

Associated Lab Samples: 10312267003, 10312267006

ParameterUnitsBlank ResultReporting LimitAnalyzedQualifiersArsenicmg/LND0.0005007/07/15 08:41

Arsenic mg/L ND 0.00050 07/07/15 08:41 Selenium mg/L ND 0.00050 07/07/15 08:41

LABORATORY CONTROL SAMPLE: 2012887

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Arsenic .08 0.085 106 92-110 mg/L Selenium mg/L .08 0.085 106 93-112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2012888 2012889 MSD MS 10312267003 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Arsenic mg/L 0.018 .08 .08 0.10 0.10 107 108 89-114 0 20 Selenium mg/L 0.015 .08 .08 0.10 0.10 107 107 85-117 0 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

LABORATORY CONTROL SAMPLE:

Date: 07/14/2015 02:31 PM

QC Batch: WETA/23586 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

METHOD BLANK: 2008730 Matrix: Water

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

2008731

Units	Result	Reporting Limit	Analyzed	Qualifiers
mg/L	ND	1.2	06/27/15 14:27	
mg/L	ND	0.050	06/27/15 14:27	
mg/L	ND	0.10	06/27/15 14:27	
mg/L	ND	1.2	06/27/15 14:27	
	mg/L mg/L mg/L	Units Result mg/L ND mg/L ND mg/L ND	Units Result Limit mg/L ND 1.2 mg/L ND 0.050 mg/L ND 0.10	Units Result Limit Analyzed mg/L ND 1.2 06/27/15 14:27 mg/L ND 0.050 06/27/15 14:27 mg/L ND 0.10 06/27/15 14:27

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.5	100	90-110	
Fluoride	mg/L	1	1.0	102	90-110	
Nitroto oo N	ma/l	4	0.05	OF	00 110	

 Fluoride
 mg/L
 1
 1.0
 102
 90-110

 Nitrate as N
 mg/L
 1
 0.95
 95
 90-110

 Sulfate
 mg/L
 12.5
 12.2
 97
 90-110

MATRIX SPIKE & MATRIX SPIR	(E DUPLIC	CATE: 20087	32		2008733							
		10312267003	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	424	12.5	12.5	380	382	-354	-337	90-110	1	20	M6
Fluoride	mg/L	0.52	1	1	0.90	1.0	37	49	90-110	12	20	M1
Nitrate as N	mg/L	17.8	1	1	16.7	16.8	-109	-102	90-110	0	20	M6
Sulfate	mg/L	350	12.5	12.5	320	321	-237	-225	90-110	0	20	M6

MATRIX SPIKE & MATRIX SPIK	E DUPLIC	ATE: 20087	34		2008735							
			MS	MSD								
		10312024001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	3.9	12.5	12.5	16.2	16.2	98	98	90-110	0	20	
Fluoride	mg/L	0.15	1	1	1.1	1.1	98	98	90-110	0	20	
Nitrate as N	mg/L	< 0.050	1	1	0.96	0.97	94	94	90-110	0	20	
Sulfate	mg/L	<0.60	12.5	12.5	12.5	12.5	95	95	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

QC Batch: WETA/23696 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

METHOD BLANK: 2014991 Matrix: Water
Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Nitrogen, Ammonia mg/L ND 0.040 07/07/15 11:31

LABORATORY CONTROL SAMPLE: 2014992

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Nitrogen, Ammonia mg/L 1.0 101 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2014993 2014994

MS MSD MS 10312267003 Spike Spike MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 0.020J 1 1.0 90-110 3 20 Nitrogen, Ammonia mg/L 1 1.1 103 106

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2014995 2014996

MS MSD 10311780005 MS MSD MS MSD Spike Spike % Rec Max % Rec Parameter RPD Units Result Conc. Conc. Result Result % Rec Limits RPD Qual Nitrogen, Ammonia mg/L 0.062 1 1 1.1 1.1 104 107 90-110 2 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

QC Batch: WETA/23588 Analysis Method: SM 4500-P E

QC Batch Method: SM 4500-P E Analysis Description: SM4500P-E, Phosphate, Ortho

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

METHOD BLANK: 2008762 Matrix: Water

Associated Lab Samples: 10312267001, 10312267002, 10312267003, 10312267006

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Orthophosphate as P mg/L ND 0.0050 06/27/15 14:46

LABORATORY CONTROL SAMPLE: 2008763

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Orthophosphate as P mg/L 0.097 97 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2008764 2008765

MS MSD 10312261010 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Orthophosphate as P 0.072 0.18 80-120 0 30 mg/L .1 .1 0.18 104 104

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2009262 2009263

MS MSD 10312267003 MS MSD MS MSD Spike Spike % Rec Max % Rec Parameter RPD Units Result Conc. Conc. Result Result % Rec Limits RPD Qual Orthophosphate as P mg/L 0.44 .1 .1 0.54 0.54 104 104 80-120 0 30

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis
PASI-V Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

Date: 07/14/2015 02:31 PM

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RCRA-CERLCA-CALCINER-REV

Pace Project No.: 10312267

Date: 07/14/2015 02:31 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10312267001	505121A	EPA 3010	MPRP/5532	EPA 6010C	ICP/4380
10312267001	505121A	EPA 3010	MPRP/55677	EPA 6010	ICP/24392
10312267002	505604	EPA 3010	MPRP/5532	EPA 6010C	ICP/4380
10312267002	505604	EPA 3010	MPRP/55677	EPA 6010	ICP/24392
10312267003	505108A(ABC)	EPA 3010	MPRP/5532	EPA 6010C	ICP/4380
10312267003	505108A(ABC)	EPA 3010	MPRP/55677	EPA 6010	ICP/24392
10312267006	5051704	EPA 3010	MPRP/5532	EPA 6010C	ICP/4380
10312267006	5051704	EPA 3010	MPRP/55677	EPA 6010	ICP/24392
10312267001 10312267002	505121A 505604	EPA 3020 EPA 3020	MPRP/55767 MPRP/55767		ICPM/25214 ICPM/25214
10312267003 10312267006	505108A(ABC) 5051704	EPA 3020 EPA 3020	MPRP/55768 MPRP/55768		ICPM/25213 ICPM/25213
10312267001 10312267002 10312267003 10312267006	505121A 505604 505108A(ABC) 5051704	EPA 300.0 EPA 300.0 EPA 300.0 EPA 300.0	WETA/23586 WETA/23586 WETA/23586 WETA/23586		
10312267001 10312267002 10312267003 10312267006	505121A 505604 505108A(ABC) 5051704	EPA 350.1 EPA 350.1 EPA 350.1 EPA 350.1	WETA/23696 WETA/23696 WETA/23696 WETA/23696		
10312267001 10312267002 10312267003 10312267006	505121A 505604 505108A(ABC) 5051704	SM 4500-P E SM 4500-P E SM 4500-P E SM 4500-P E	WETA/23588 WETA/23588 WETA/23588 WETA/23588		